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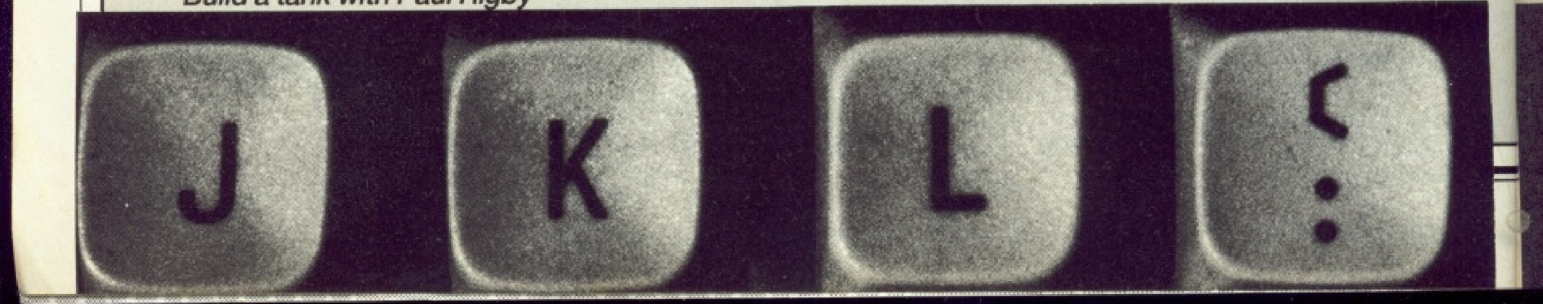

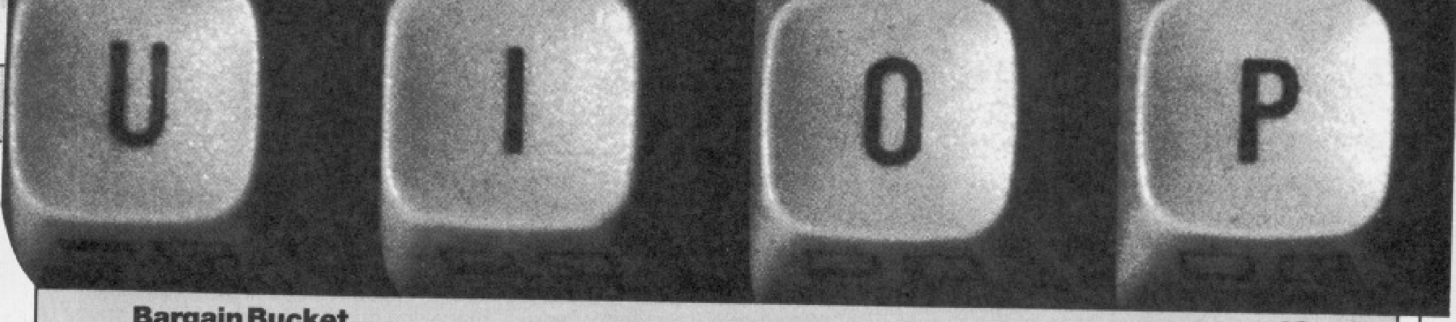

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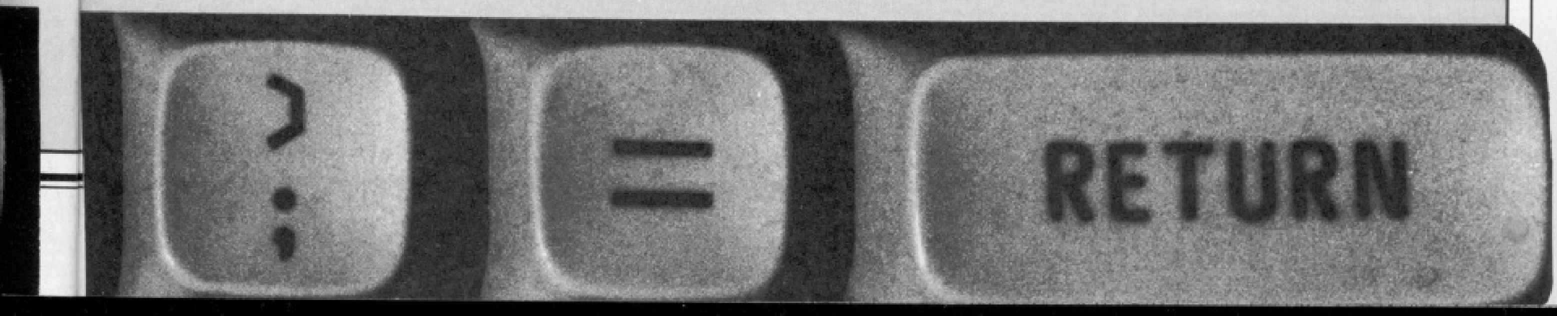

Dear CCI Reader,

This year's Personal Computer Show at London's Earls Court was an oddly uncertain affair. The cavernous exhibition hall with its razzamatazz of huge stands and blaring videos usually gives at least the glitzy confidence of "the circus has come to town"; with the games companies self-dazzled with the idea that hype is all important no matter the cost, or some would say, no matter the the result. This year they seemed to have regained their sense of reality and their stands were more functional than egotripping. Some even confined themselves to discreet reception rooms or nearby hotel suites. Others clearly wondered whether they should come at all.

The hardware companies, who were reasonably out to impress potential buyers during the Christmas season, did make a substantial showing. Notable among them was Commodore, who had not only their largest stand ever but one which worked, literally, on two levels. On the ground floor, they showed off their machines, the Amiga, the PCs and even the 64. On the upper floor, there was a pleasant private lounge and bar where the big deals with distributors and other trading activities were carried on in low-voiced discussions in individual booths; an impressive show of corporate confidence and power from Steve Franklin's team.

The whole PC Show did not reflect that confidence though. It had a restained tone which was probably appropriate for the computer industry in general which seems, at this moment, to be hesitating at one of its periodical crossroads, not knowing quite which way it should progress.

In the home computer field, there is substantial confusion. Are the 8 Bits really dead? Some software companies won't go near them but Commodore knows that this Christmas the 64 will still be worldwide the biggest seller with 100,000 plus being bought in the UK alone, in a games-based pack though and so appealing to a very young audience.

No other 8 Bit machine is likely to be successful but the console fans say for that very young audience a computer isn't what is needed at all. They believe what has happened in the U.S.A., where the Nintendo has almost blown away computers for junior entertainment, will occur everywhere else too. Will Nintendo, Sega, the handheld Lynx (the costly development of which seems to have brought the once mighty Epyx to the edge of disaster) or the Konix console (which may have done the same damage to the popular joystick manufacturer) really push out the computer? And should software companies risk creating expensive games for these consoles that might not even make it? The questions hung over the Show like a cloud.

Nor was all clear on the more serious side of computing. Amstrad, with its reputation injured by recent technical difficulties was subdued and apparently betting its future on a fax machine. Acorn's hold over the British educational scene continues to fade and its Archimedes was almost ignored. Atari's stand looked more defiant than confident as well it might be with the beating its ST is getting from the Amiga in virtually every country in the world and now especially the U.K. It did have support for its Portfolio, a mini-portable PC but though I heard one longtime Commodore enthusiast shamefacedly praise it, the doubts were that it would be taken seriously by the business market at which it is aimed, particularly as Psion have also launched a very small but higher specification PC portable too.

It is clear that the portable PC is getting more and more popular. But will it really bite into the "ordinary" PC market; or will it succeed only as a peripheral that the harried business user adds to his "real" desktop computer? Another query over the industry.

And what anyway is to be the fate of the "ordinary" PC? The low level MSDOS computer now seems confined to the private user and very small business and the 286, hardly yet widely used, is losing ground to the 386's, clones of which can already be bought for under £1000. But whatever happened to the "new" IBM standard, the OS/2, introduced a year or so ago? No-one could forecast with any confidence where that whole market was going either.

Even the PC Show itself has doubts surrounding it. The Organisers are now locked in a £5,000,000 legal battle with the magazine company that until now sponsored it. We may, next year, end up with two or even three shows that split business and leisure right apart.

Am I reading too many uncertainties into a situation which is normal in any industry as fast changing as computing? Is it all perhaps a reflection of more genral uncertainties concerning a dynamic world in which even the financial and other situations are daily changing? We seem to be at a crossroads not just in computing but in everything from the the political structures of the, until now, Communist countries to whether the software companies will continue to write games for the 64 - a pretty big range of uncertainty with which to deal!

Some year ago, Alvin Toffler wrote a book called "Future Shock". It described change as today accelerating so speedily that what should have been the future arrives, shockingly, now and so is almost impossible for us to absorb quickly enough. In computing, as in many areas of life, we are feeling the effects of astonishingly fast change. Just seven years ago, Commodore was still producing the Vic20, now we are on the edge of a Unix Amiga and a Commodore 486 PC. It is not surprising with changes like that there is confusion, uncertainty and doubt. And perhaps we have to learn to live with it and find what consolation we can.

If you are reading this magazine, you probably own a computer. It is really only a binary logic machine and works in a straigthforward way. The answer is either 1 or 0, right or wrong. When you turn to it, in the face of so much confusion in the world, it offers a sometimes annoyingly rigid but at least reliable certainty. It may be inflexible, just 1 or 0, but its simplicity is rather comforting; something agreeably reassurring as we face the nineties, an even more uncertain decade.

Antony H. Jacobson
Managing Editor and Publisher

COMMODORE COMPUTING INTERNATIONAL

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Super Snapshot v4

The State of the Smart

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KUNA'S K-COMM 2

Kuma Computers have added a communications program to their range of Amiga software with the release of K-Comm 2.

The range of features includes: Baud rates from 75 to 9600, Sending and receiving text and binary (Xmodem) files, log files to disk, printer output, control code filter to terminal screen and printer, Viewdata (Prestil) emulation mode, Hayes modem support in addition to 'dumb' modems, programmable function keys, autodialling and log-on sequences, on screen help information.

Jon Day, Marketing Director of Kuma said: "We aimed to produce a competitively priced, easy to use package with the facilities users really want. Judging from the comments we received from Amiga owners at the Personal Computer Show K-Comm 2 has achieved this objective". K-Comm 2 is available now at a retail price of £29.95 including VAT.

Contact: Kuma on 0734 844335.

ANTI-VIRAL GUIDE

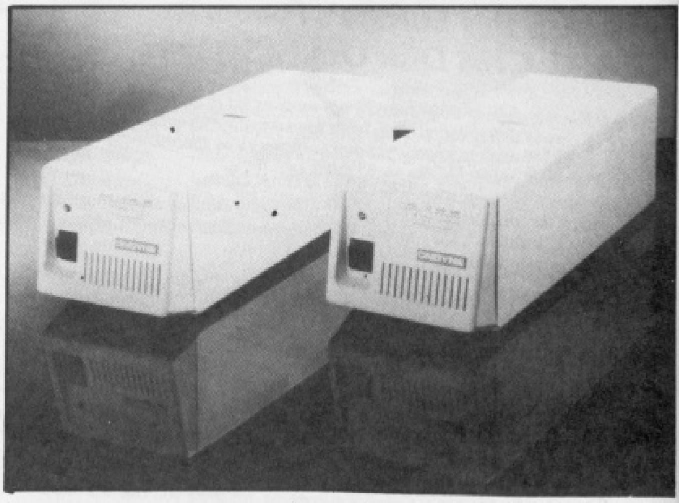
To help combat the increasing threat of viral attacks on corporate data, the Data Security Division of Price Waterhouse is launching 'The Complete Computer Virus Handbook'. This completely revised and updated guide, complete with legal advice, is published for the first time by Pitman.

The Handbook explains, for technical and non-technical computer users, exactly what a virus is, what it does and its consequences. It then advises on how to prevent attacks and how to cope with seventy-four (74) known viruses.

a section on recovering from viral attacks evaluates thirty-nine (39) anti-virus software products, using the CVIA classification.

Detecting an infection may also reveal the source of a virus, which offers the possibility of taking legal proceedings against the cause of the attack. The Complete Computer Virus Handbook includes a section which clarifies the legal side of being infected by a virus under UK law.

"The full extent of the ocmputer virus problem has still not been fully realised" comments Price Waterhouse data security expert David Frost. "New initiatives are needed, and we hope that the Virus Handbook will play its part in raising public, business and government awareness of this vital issue". Price £14.95.



RANGE OF ONDYNE UNINTERRUPTIBLE POWER SUPPLIES FROM ACTION

Now available from Action, back-up power supplies from Ondyne designed to keep vital computer equipment running take less than one millisecond to sense supply failure or voltage drop and come into action.

Unlike earlier types, which had to run continuously to ensure continuity of supply, their high speed of reaction allows them to be run only when needed, so that they can be made considerably smaller and lighter. All models give ten minutes back-up at full rated power.

The PL Series ranges from the PL300, at £375.00, which supports 300VA (approx 250W), to the PL1500, at £1175.00, which supports 1500VA (1300W). Output of these units is 240V at 50Hz via twin 13-Amp sockets.

The HO P.S. is a slimline model with one pair of CEE22 output sockets providing stand-by output of 240V, 50Hz at 600VA, and a second pair providing 600VA standard mains supply via a filter. It measures only (W)413 × (D)438 × (H)65mm, and is offered by Action at £729.00.

Contact: Action Computer Supplies, Abercorn Commercial Centre, Manor Farm Road, Wembley, Middx HA0 1WL. Tel: 0800 333 333.

Activision Bombs Away

After a 12 month period of development Activision's Bomber Fligh Simulator for the home computer is set for release in October 1989 on the Activision label.

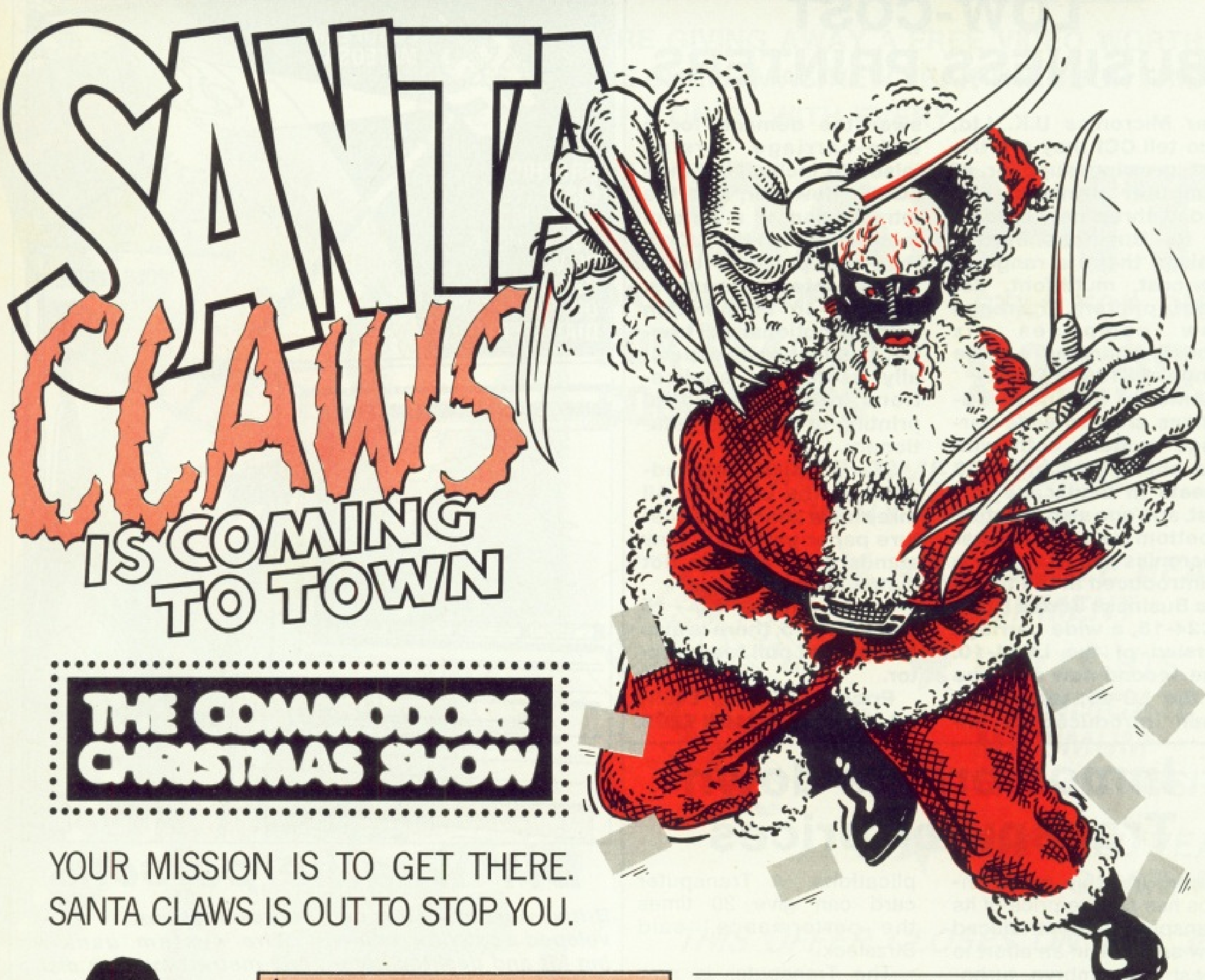
Bomber is a multi-aircraft 3-D flight simulator. It will be available on C64, Amiga and PC formats.

Utilising three dimensional computer technology, Bomber offers the player a choice of six modern military aircraft — the F1-11, two tornados, the F-4 Phantom, the SAAB Viggen, the F-15 and the Mig 27. Each jet has been programmed with sophisticated individual handling characteristics, and the player has a choice of 7 potential adversaries in air to air combat.

The game is designed to offer the player a multi-role capability both in ther air and on the ground. The 3-D landscape visuals — Bomber is set in the US mid-west — are the most realistic yet to be seen on a computer. (Haven't you heard that somewhere before?)

Bomber has been developed by Vektor Grafix, whose previous projects were Star Wars and The Empire Strikes Back. As a part of there research into creating Bomber, John Lewis and Andy Craven at Vector Grafix had learn to fly and are currently just hours short of their pilots licenses.

PC £34.99, Amiga £29.99, C64 disk — £19.99, C64 cassette £14.99.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LOW-COST BUSINESS PRINTERS

Star Micronics U.K. Ltd, who tell CCI they are the fast growing supplier of computer printers, has added three new models to its Business Series, making theirs a range of low-cost, multi-font, dot matrix printers. The range now comprises six models spanning a price range of £199 to £499.

Among the new additions are two wide carriage models, both with the ability to handle A3 sheets in landscape format, and one also sporting a bottom feed facility, star Micronics report.

Introduced at the top of the Business Series is the LC24-15, a wide carriage version of the LC24-10. The second new machine is the LC-15, which has been introduced to answer the demand for a wide-carriage version (also 16½ inches) of Star's LC-10. However, it is the introduction of a bottom feed facility on the LC-15 that may prove to be of greater interest to users. Working in conjunction with the optional pull tractor, this feature is especially useful for applications requireing label printing or multi-part stationery.

Star's third new addition is the LC-10 II. All three new machines feature paper parking — now standard on all Star dot matrix printers.

On the LC - 15 and LC24-15, there is also an optional pull feed tractor.

Prices: LC24-15, £499; LC-15, £399; LC10 II £229.

Inmos brings down Transputer prices

Former UK chip maker Inmos has cut the price of its Transputer and introduced new software in an effort to boost the embryo turbo-charged pc market.

Last week the now Franco-Italian owned company unveiled its latest Transputer update, the T400, and cut prices across the range by up to 70%; down to $2 per mips.

The move is to push the chip into the markets and open up a range of low cost applications, according to Pasquale Pistorio, chairman of Inmos parent SGS Thompson.

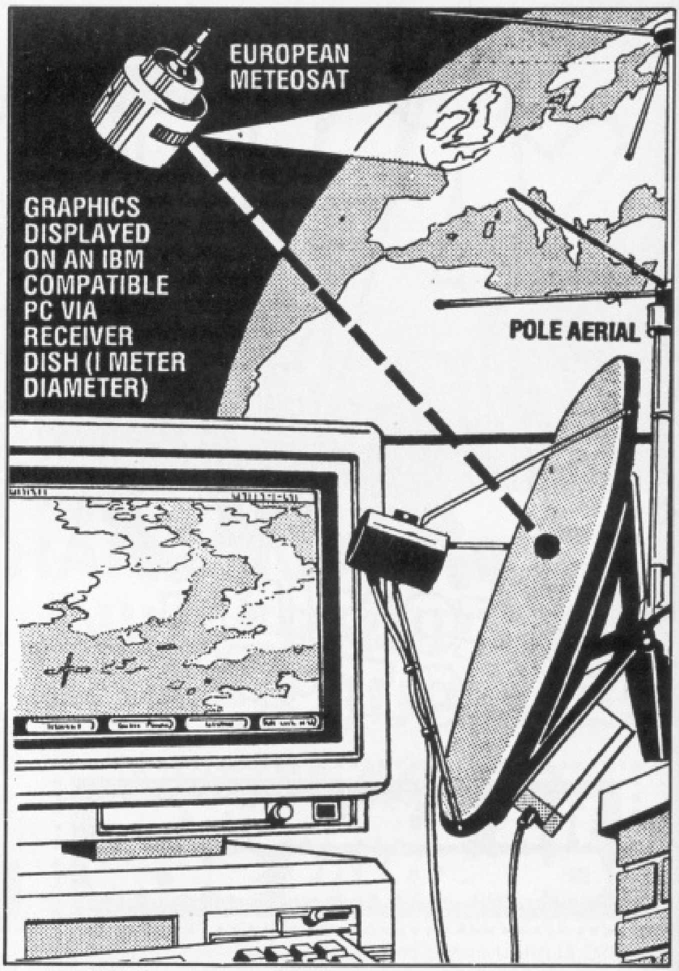
However Transputer use may not be in the traditional computer market-place, said Paul Strzelecki, Inmos marketing director. 'There is another generation of pcs to go before the Transputer becomes an integral part of the host machine,' he said.

The immediate effect of the price cuts will be in the market for pc cards which speed up particular applications. 'A Transputer card can give 20 times the performance,' said Strzelecki.

The Transputer is now supported by a range of software products which, according to the company, makes multi-processing cheaper and easier. Parallel programs for the chip can be written in conventional languages such as C.

Inmos also unveiled plans for its next generation Transputer, the H1, which it claims will have a performance of more than 100mips.

The announcement underlines SGS Thompson's commitment to Inmos, which it bought last year. The Bristol-based chip maker has had a difficult history since it was launched in 1978 by the last Labour government. In 1984 the present government, in spite of its claimed encouragement of information technology sold to Thorn EMI, which still retains 10% stake.


EUROPEAN METEOSAT
GRAPHICS DISPLAYED ON AN IBM COMPATIBLE PC VIA RECEIVER DISH (I METER DIAMETER)
POLE AERIAL

DIY weatherpersons

British Aerospace has developed a satellite receiving kit and desktop computer which analyses satellite pictures. Called Dartcom, the kit will give PC owners direct access to informatin beamed down from satellites orbiting above our heads. Dartcom allows users to enhance pictures, colour them and even make 3-D representations.

The system uses a one-metre receiving dish attached to an IBM-compatible computer. All that is needed to receive satellite images is an adaptor card and a special graphics software package, costing £4,977 in total. Until now, the cost for a comparable system has been around £20,000.

Intel Releases

Intel have announced that the 25MHz i486, was released in quantity in October. Sampling of the 40MHz i486 will take place later this year, and they also announced the 50MHz version sampling by the end of 1990. While the 33MHz version is said to run at 20 Vax Mips (VUPS), the 50MHz version is expected to perform at 30 VUPS, according to the company.

Intel predict the i686, containing 22 million transistors, will be ready by late 1995 or early 1996, and by the year 2000, the 100 million transistor i786 will appear, running at 250 MHz while occupying only 1 square inch.

CBM already market a 386 MSDOS machine and are believed to be preparing to enter the 486 field early in 1991.

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Supermicrocomputer Markets Expand

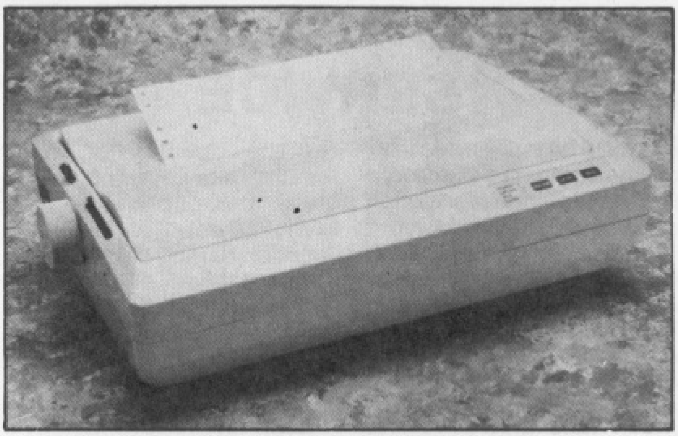
The total market for supermicrocomputers is expected to reach $22.8 billion by 1994, according to a new report just released by Market Intelligence Research Company.

The report positions supermicrocomputers between high-end microcomputers and low-end minicomputers in processing power, speed, capacity, and usage. More compact and less expensive than minicomputers, superminicrocomputers also support multitasking and multiple users the same way minicomputerrs can, the report claims.

An overview of the supermicrocomputer industry and trends is included in the report. A summary of the world market is given by revenues, growth rates, and competitive analysis/market share. A section on application includes areas such as office automation, data entry/management, graphics and CAD/CAE.

Mindscape goes Tink!

Mindscape are releasing for the U.S.A. on the C64 six of the classic children's products designed by award-winning children's author Mercer Mayer. The products are ABC's with the Tink Tonks (formerly "Tink's Adventure"), Being a Smart Thinker and the Tink Tonks (formerly "Tonk in the Land of Buddy Bots"), Spelling with the Tink Tonks (formerly "Tuk Goes to Town"), Develop Thinking Skills with the Tink Tonks (formerly "Castle Clobber"), Count and Add with the Tink Tonks (formerly "Tinka's Mazes") and Tink's Subtraction Fair. The products are designed to supplement basic skills acquisition in the ABC's, counting, keyboarding, addition and subtraction as well as entertain children ages 4 through 8.



MANNESMANN TALLY MT81 NINE-PIN MATRIX PRINTER

Mannesmann Tally's MT81 is an entry-level nine-pin printer used for educational and small business applications requiring both reliability and flexibility: it will handle workloads up to 2,000 pages per month.

Now it is available from Action at £129.00. The MT81 prints in draft mode at 155 cps (12 cpi), in 'correspondence' mode at 130 cps, and in NLQ mode at 26 cps. Character pitch can be set between 10 and 20 cpi, and line spacing can be set at 6 or 8 lpi, or programmed in increments of 1/216in.

Features include IBM ProPrinter and Epson FX85 emulation, graphics capability with resolution up to 240 dpi, push-feed tractor, auto paper park and an 8K buffer. Options available include a cut sheet feeder, a serial interface and a Perspex desk-top stand. These are offered at £65.00, £38.00 and £45.00 respectively when purchased with the printer.

Contact: Action Computer Supplies, Abercorn Commercial Centre, Manor Farm Road, Wembley, Middx HA0 1WL. Tel: 0800 333 333.

Twist & Shout

This is not a new solution for back pains, or even a software program for chiropractics. Instead, Twist & Shout, published by The Software Toolworks and distributed in the UK by Mindscape International, provides sideways printing for any spreadsheet, word processor, or project manager file, regardless of number of columns. As a bonus, the package includes a disk-based print spooler, allowing background printing for all applications.

Twist is the core of the package, offering direct sideways printing of worksheet files. Configurable as a Lotus macro, the program can also be added-in to Framework, Quattro, Symphony, and VP Planner Plus. As a standalone, it can also directly read SuperCalc, Smart, Multiplan, Javelin, VisiCalc, and The Secretary Bird worksheets, as well as any ASCII text file — useful for A4 landscape priting from a word processor.

Twist offers familiar Lotus-style commands, fifteen sizes of print-out (up to 240 lines/page), colour, bold, and italic printing, and context-sensitive on-screen help.

Shout is a banner-printing utility capable of producing lettering up to 13.5" high in up to 10 different fonts. Text can be typed directly into the program or imported as ASCII from a word processor; a useful 'dynamic length display' shows the length of the banner.

Twist & Shout supports the majority of laser and inkjet printers and all dot-matrix printers, including colour. The program carries a recommended retail price of £49.99 including VAT, and should be available through most dealers. A function comparison chart with Sideways is attached. Contact: Mindscape International Limited, Rolls House, 7 Rolls Buildings, Fetter Lane, London EC4A 1NH.

Tel: (044) 486545/547.

UNIX Software Market

By 1995, worldwide sales of UNIX and UNIX-like software products will reach $9.3 billion, up from sales of only $2 billion in 1985. Developed by AT&T in the late 1960's, UNIX is a powerful multiuser, multitasking computer operating system. UNIX-like systems, developed by other companies, share many of the features that make UNIX one of the most popular operating systems ever offered. These and other key findings are presented in a new report, "UNIX and UNIX-like Software Markets"

Users turn to UNIX to take advantage of its portability, library of applications programs, and open standards and architecture. As users of UNIX and UNIX-like systems downsize to smaller computers, they want the advantages of UNIX plus the design features and user-friendly interfaces of microcomputers, the report claims.

BRITISH ON-LINE SERVICE

The Direct Connection claims to be the best connected on-line information service in Britain.

With several new electronic mail gateways opening today, subscribers to The Direct Connection can exchange messages with an estimated four million users on over 12,000 electronic mail and computer systems worldwide.

Messages can be sent to and received from major commercial and academic networks throughout the World. These include: CompuServe, MCI Mail, Dialcom (including Telecom Gold), JANET (the UK Academic mail network), BITNET, CSNET, NSFNET, USENET, and ARPANET.

The cost is five pence (plus VAT) per 1,024 characters to all external systems. Mail to other subscribers on The Direct Connection is free.

The opening of these mail gateways coincides with the public launch of The Direct Connection, a British on-line service offering a range of innovative communication, new and information facilities. Previously, the service had only been available by special request, to a limited group of subscribers.

Existing subscribers come from a range of industry sectors: banks and other financial institutions, oil companies, mail order companies, computer consultants and dealers, engineering companies, software and hardware manufacturers, Government institutions and departments, newspapers and magazines, education departments.

Contact: The Direct Connection, PO Box 931, London SE3 7BA.
Tel: 01-853 2283

MICROLINK QUITS TELECOM GOLD FOR ISTEL INET IN £10M. DEAL

MICROLINK, the information and electronic messaging service with more than 10,000 subscribers, has switched from Telecom Gold to Istel Inet in a deal worth £10 million over the next three years.

The switchover Microlink say is expected to result in the service more than doubling its present customer base within the next two years. It will also pave the way for expansion into more specialised business and leisure markets.

MICROLINK, joined Telecom Gold more than four years ago and grew to become its largest single customer. Most of its subscribers consist of small and medium-sized businesses.

"There are many practical advantages in the move for our customers, not least of which is the fact that subscribers will now be able to connect to the service from any of 78 local call network points throughout the UK," Derek Meakin, MICROLINK Chairman.

In addition to international electronic mail, fax, telex and telegram facilities, MICROLINK now offers access to more than 1,200 external information sources providing reports on global finance, news, sport and weather.

'Hard' game

Screen 7 have announced the signing of 'Vinnie Jones' the star of Leeds United. Screen 7 will be launching the computer game 'Vinnie Jones Soccer Spectacular' late this year.

Available on on the C64 and Amiga, programmed by Emerald Software.

Says Roger Hulley of Screen 7: "This game should separate the men from the boys".

A Vinnie thing to say, don't you think?

Microprose's Bushido

Bushido, the Way of the Warrior, is a new action strategy game from Firebird for the C64. Set in feudal Japan, the local lords or 'daimyo' are in constant power struggles. Each are trying to increase the size of their land, power and wealth.

The leader of one of the largest clans has entrenched himself in a well guarded fortress. Large scale attack has already failed and it is your task to infiltrate this fortress with a single man and thus regain control of the area.

At your disposal are several characters, ranging from a monk to a Samurai warrior. Each has his own special qualities, from sheer strength in hand-to-hand combat, to guile and cunning. Your warrior does, however, have a magical belt which can transport him back to base and safety if his life is severely endangered. Once there he can re-train the extra skills needed and attempt another assault on the fortress.

Bushido will be available shortly on the C64 at a price of £9.99 on cassette and £12.99 on disk.

Accolade's Blue Angel

No, this does not refer to Accolade's PR Princess, Nabia Singh. It is Accolade's new flight simulator — which, they tell us, computer owners are guaranteed a view unlike any other as they gain a pilot's perspective from the cockpit of a Blue Angel fighter jet.

The Blue Angels will allow computer owners to learn over 25 of the same manoeuvres performed by the real Blue Angels, the U.S. top aerobatics team, then select any one of the four F/A-18 Hornet jets and take off with the squadron. "In the world of aviation, there is only one Blue Angels team, and in the world of computer flight simulations, there is only one that allows people to experience formation flying," noted Ralph Giuffre, Accolade's vice president of marketing. "The Blue Angels will give people the experience of exceeding speeds over 550 mph and do it just three feet away from three other jets."

Beginning in a wire-frame flight simulator, you will learn specific manoeuvres such as the Double Tuck Over Roll, the Knife Edge and the 8-Point Roll by following a three-dimensional path of the stunt in relation to the other Angels in the formation. Once you learn the ideal flight path of the manoeuvre, you can practice it from the cockpit perspective and watch your flown path plotted in 3-D against the ideal path.

"The view from a chase plane or a hot air balloon will give you two very different perspectives even while you continue controlling your jet," observed Giuffre. "And if you prefer the traditional view from the grandstands, you can have that too." Giuffre added that a free-flight mode will release players from the squadron and allow them to tour the airfield from a number of different positions.

Amiga and IBM Compatibles: £24.99. C64 cassette and disk £9.99, £16.99

DUNGEON MASTERS ASSISTANT, VOL 2

Strategic Simulations, Inc. has released the second utility program for use with TSR, Inc.'s ADVANCED DUNGEON & DRAGONS® game - Dungeon Masters Assistant, Volume II: Characters and Treasures. Dungeon Masters Assistant, Volume II is a time saving Utility that enables Dungeon Masters to generate detailed player or non-player characters and large treasure hoards in moments.

Every facet of character generation, from languages and spell lists to class and racial abilities, is accounted for. All character classes, including multi-class characters can be rolled up in a snap and will appear on ready-made character sheets with all the pertinent information ready to use. The character sheets can even be printed for instant use.

All magic items from the AD&D® Dungeon Masters Guide and Unearthed Arcana, plus all treasure types from the Monster Manual and Monster Manual II, can be generated using this powerful program. By letting the computer do most of the number crunching work, such time consuming chores such as creating large numbers of gems, jewelry, or intelligent weapons become simple tasks.

Dungeon Masters Assistant, Volume II: Characters and Treasures is available in the U.K. from U.S. Gold and in the U.S.A. from Electronic Arts (800- 245-4525, C64 Disk $29.95.

£2,000 IN TAX SAVED!!

Although Digita is very familiar with receiving letters from satisfied customers, Mr D S Staples is quite an exception.

Having invested £39.95 in Digita's PERSONAL TAX PLANNER, he wrote to express his appreciation in securing a tax refund of £1,111.98. Remarkably enough, 2 weeks later Mr Staples wrote again confirming an additional tax refund of £689.15!!

(Unfortunately, at the moment Digita are declining to guaranteed a £2,000 tax refund for new purchasers PERSONAL TAX PLANNER.)

Bring back the glory days!

That's the brief of the newly appointed PLAYER MANAGER of a struggling third division club. His success depends on four distinct aspects of the game to be released shortly by Anco.

1. Playing Skills of the Manager

This part of the game is a refined version (new player attributes) of Anco's successful KICK OFF, retaining its pace, flavour and the game play. Having selected himself, he can as an international class player, play a decisive role in the lower divisions.

There are over a thousand players in the four division league. Each player is an individual with a unique combination of the following attributes. Shooting accuracy, passing accuracy, pace, stamina, application, aggression, height and tackling skill.

These attributes are influenced by the player's Age, Mental and Physical Dexterity, Quality Of Experience, Weight, Temperament and Morale. There are several other factors such as injury, disciplinary points, unsuitable playing position which influence a player's performance.

Four standard tactics are provided by the game as a UNIQUE feature, facility to design tactics. The pitch is divided in blocks. The Manager specifies the position of each for the ball in each block. He can move the ball from one block to another and see the ray trace of the players' movements. He can devise and store as many tactics as he likes but has a choice of only four to adopt in a match.

Devising winning tactics, acquiring players with right skills from the TRANSFER market within the financial constraints imposed by the Board and selecting a team with right balance is the test of Managerial skills. When to hang his boots is probably the toughest and most important decision he has to make.

As in real life, hosts of other factors like referees, injuries, disciplinary problems, team morale etc. can lay to waste the best laid plans of a manager. The PLAYER MANAGER Anil Gupta of Anco tells us everyday realities of a Manger's life.

Storm across Europe

Strategic Simulations, Inc. has released its newest World War II strategy game – Storm Across Eurpe. This one to three player simulation from Dan Cermak, the author of Colonial Conquest, allows for the recreation of the entire war on a grand strategic scale.

It covers every part of the raging conflict in Europe from 1939 through 1945, from North Africa, to Sweden, from Gibraltar to the Ural Mountains in Russia. Each game turn represents three months of action. Armies consist of units, each rated for strength and efficiency. They vary in the number of tanks, para-troops, infantry, air support, and mechanized forces.

Prices: C64 disk $49.95

Mindscape's is best sellers

Some of the biggest-selling arcade and sports hits of all time will be available this fall, in the U.S.A. in four low price collections from Mindscape.

Collections of five arcade games — including the hits Gauntlet and Paperboy — will be available for the IBM PC and compatibles, Commodore 64/128. A collection of four sports games – including Superstar Ice Hockey and Indoor Sports – will be available for the Commodore 64/128.

The packages, which say Mindscape, are valued at between $130 to $190, will sell for $34.95 to $49.95, depending on the format.

Mindscape's "Arcade Mega-Mits" for the IBM PC and compatibles will include Gauntlet, one of the most successful arcade games ever; Paperboy, another record-breaking arcade hit; Indiana Jones and the Temple of Doom, a successful arcade title based on the popular movie; Road Runner, an arcade game based on the popular cartoon; and Blockbuster, the game that takes up where the original Breakout left off. The package will retail at $49.95.

"Arcade Mega-Hits" for the Commodore 64/128 will also incude Gauntlet, Paperboy, Indiana Jones and the Temple of Doom, Road Runner and Blockbuster. The package will retail at $39.95.

The sports collection contains four award-winning sports games by SportTime for the Commodore 64/128: Superstar Ice Hockey, Indoor Sports (which includes bowling, darts, air hockey and ping-pong), Superstar Soccer and Clubhouse Sports (which includes foosball, billiards, skeeball, crazy pool, pinball and a shooting gallery).

The package will retail at $34.95.

...news...news...news...news

LED TECHNOLOGY LIMITED

FREE LED BOARD

To illustrate the availability and practical applications of four clearly distinguishable colours of light emitting diodes, LED Technology is offering 1000 free demonstration boards to engineers, designers and stylists of electronic equipment.

The boards consist of four light emitting diodes, super bright red, pure green, sunset orange and high-performance yellow.

These are connected in series with a current limit resistor designed to draw approximately 20 mA when attached to a 9 V PP3 battery via the battery clip (also provided).

The boards are ready to use examples of the new flexibility of application available from LED due to recent advances in the technology. Not only are all the company's standard, special shape and custome discreet light-emitting diode lamps available in these and other colours but so are all numeric, alphanumeric and dot matrix displays.

These boards are available on request. Because they use a battery they are used for presentations in marketing meetings, boardrooms or on site.

Contact: Steve Spink, LED Technology Division, Fibre Data Group, Unit 8, Pool Industrial Estate, Druids Rd., Redruth, Cornwall, TR15 3RH. Tel: 0209 215424.

AMIGA HYPERMEDIA

Intuitive Technologies, developer of advanced software products for Commodore-Amiga personal computers, and American Software, America's leding distributor of Amiga software and hardware products, announced that they are now shipping UltraCard, the new multitasking, information construction environment that links images, numbers and text into fully interactive, custome information bases.

Though modeled on HyperCard for the Apple Macintosh, UltraCard adds an additional dimension by giving users easy access to the Amiga's unique colour graphics and multitasking abilities.

According to Mike Lehman, President of Intuitive Technologies, "What we've done is taken the hypercard concept and added on to it for multi-tasking. [UltraCard] is more useful because it gives the Amiga developer more ways to interact with their computer."

Besides letting anyone collect and link static information, UltraCard can also be used to develop commercial data storage and calculating applications, and to construct user interfaces for other programs — including linked AREXX compatible applications.

Unlike Hypercard, UltraCard can utilize the Amiga's powerful built-in multitasking environment, 4096 colour palette and video genlocking abilities. In addition, UltraCard's integrated support for controlling external laser video disk players, means that UltraCard can be used as the cornerstone for an Amiga-based interactive video authoring system.

UltraCard carries a retail price of $49.95 and works with any Amiga 500, 1000, 2000 or 2500 personal computer. Contact Intuitive Technologies, 2700 Garden Rd., Suite 6, Monterey, CA 93940.

Tel. 408-646-9147.

Day of the Viper

Accolade has announced the release of Day of the Viper, a galactic adventure in which players must rescue a critical defence installation which has been seized by a hostile android and his robotic army. Day of the Viper will introduce players to a multi-tasking on-screen control panel and multiple opponent real time combat.

Since 2782 A.D. a war has raged between the planets of the Star League and Gar, the ruthless cyborg master of a mechanized race. Gar was the prototype of a new project to create a supreme Genetic Android Race which could accomplish tasks with more efficiency than any human. Half human — half droid, at first Gar was faster, stronger, more intelligent and exceeded milestones beyond the researchers hopes. But the fundamental differences between his mechanical side and his human side made it impossible for him to maintain a balanced mental state.

From your orbiting ship you will control Viper-Five's movements via remote control. Your view from Viper-Five's visual sensors will allow you to control his actions as he moves through the five multi-level buildings of the base. In his path wait more than 30 completely different opponents, each with varying degrees of skill. "A watchful eye and quick reflexes are a large part of your job as Viper-Five's guide," noted Randall Thier, Accolade's Vice President of International, who explained that a fast-paced, multiple combat system in the game allows for up to four different robots at a time to attack from four completely different directions.

Thier added that unlike most multi-level adventure games, Day of the Viper's combat system is based on real time instead of the traditional turn by turn system. "If you wait for your opponent to complete his attack before you begin your own, the game will quickly be over — in your opponent's favour." The key is to find the weak points in each different robot without weakening your own armor. "With some it won't take long, but in others such as the Hunter-Killer or the heavily armoured Sentinel, it will take cunning," Thier noted.

An intelligent object management system (OMS) built into the game keeps track of every object players encounter, particularly useful when a valuable item — such as a Damage Repair Pod — must be temporarily dropped.

A built-in notepad allows players to keep track of any bit of information without ever using the keyboard. A click on anything on-screen and the item and its location are logged into the notepad which can be accessed at any time. A automapping feature will retain information about every level investigated and aid the player in his search for the main defense computer.

Amiga £24.99

CHUCKIE EGG II

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(Choccy Egg)

If you have played the classic computer game Chuckie Egg you hardly need an introduction to this "cracking" sequel, which takes us from the hen house to the chocolate Easter egg.

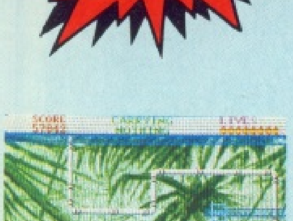
This eggcellent game is guaranteed to be salmonella free on your Amiga, ST or PC machines. It will give hours of entertainment and no matter how many times you unwrap the disc and sample the goodies it will neither make you fat nor rot your teeth!

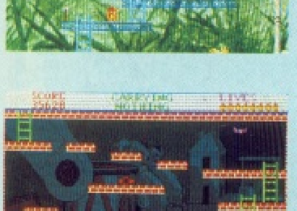
CHUCKIE EGG II

Available on Atari ST/Amiga/Spectrum/Commodore/Amstrad soon on PC

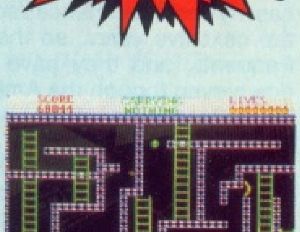
CHUCKIE EGG

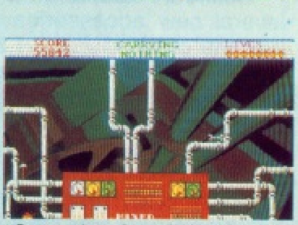
Available on Atari ST/Amiga/Spectrum/Commodore/Amstrad /Atari/MSX/Dragon/BBC/Electron soon on PC.





Screen shots from Amiga Version





Screen shots from Amiga Version

Review of Chuckie Egg by Computer Games Week

Gameplay 90%, Grafix 85%, Overall 89%

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GEOS 128 v2.0

Berkeley Softworks

Refined, re-tuned and perfected. GEOS, the graphic environment operating system for the C64 and C128, has been around for about three years or so. It was designed to give the user a friendly interface making it simple for the individual to manipulate files easily. It also give the purchaser a complete state of the art word processor and a high resolution graphics editor all in one package.

The idea was a good one, it works well and it still does. Serious users have benefited from using GEOS, the system, (unlike me), is a bit of a WIMP. I have recently upgraded to the Amiga, (cries of traitor I can hear ringing around filling my head with guilt) but read on, I still haven't stopped using my beloved C128 and the suite of GEOS utilities. The GeoFile has some extensive records stored on it that are precious. GeoCalc has my personal finances sorted out for the next five years, so they are used frequently and they have not let me down even though the Amiga is a new favourite member of the household.

> ***"What Berkeley Softworks have done is to encompass seventy modern graphic printer drivers including even some laser printers!"***

The transition to the Amiga was made easy because of GEOS. There are many similarities and a good training ground for those of you wishing to upgrade one day.

Refined, I said, and the system has several new accessories and utilities over the older v1.2 or v1.3 packages. Re-tuned, I said, and the original system has had a good dusting, not to clean out the bugs, but to increase the ease of use. Perfected, I said. What Berkeley Softworks have done is to encompass seventy modern graphic printer drivers including even some laser printers!

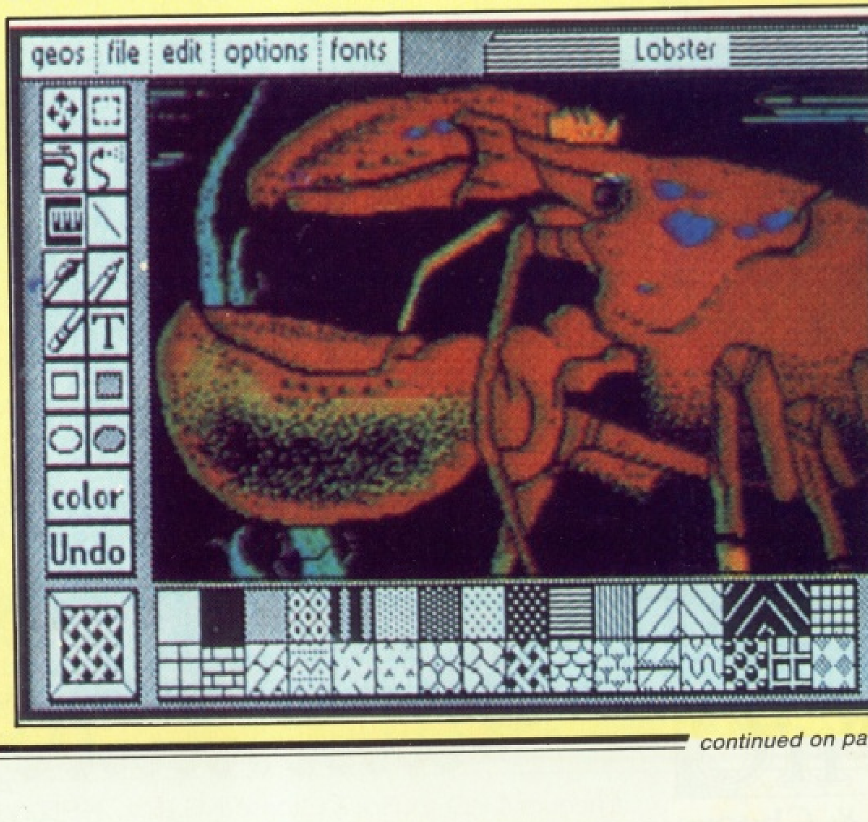
I already own the GEOS v2.0 for the C64 and now will be able to get the best from my C128 utilising the extra RAM and the 80 columns, although at this point I must say that GEOS 128 will also run in 40 columns and includes all the goodies which were on the C64 version as follows.

To begin with, if you are upgrading, you must initialise all your exsisting GEOS disks so that they will key to the new version, good news because there's no need to renew anything. The new desktop screen is the very first thing you will notice as different. There is a new digital clock in the top right hand corner of the screen showing the current time. Two disk drives are catered for and the RAM expansion units.

Desktop is where you can handle files with ease. Copying multiple files is one of the new features as well as moving or erasing multiples. Here you have the choice to call up a suite of Desktop accessories. These are a quick notepad,a calculator, an alarm clock along with photo/text albums. Main utilities like GeoWrite, GeoSpell, GeoMerge or GeoPaint can be accessed from here.

GeoWrite is the WYSIWYG word processor, all dancing all singing, version 2.1. There is now a complete spell checker called GeoSpell that looks after your compositions checking for the inevitable errors that creep in when least expected. GeoWrite gives you the ability to have individual paragraph formatting, full 8″ margins are new features. Single line spacing, one and a half or double line spacing are also possible. There are 1 fonts in 7 styles in multiple sizes. Headers and footers, column setting, search and replace, mixing text with graphics, page breaks and borders are an example of the capabilities of this very professional WP. GeoWrite is supported by several FontPacks that give you an even larger range of typefaces, these are available separately. The production of near typeset quality documents using Laser printers has to be yet one more good reason why GeoWrite is so powerful.

Text Grabber will import text from a range of other Commodore word processors converting the text to GEOS



continued on page 20

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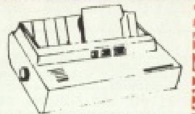

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continued from page 18

format.

GeoMerge can be used to create customised letters that can be sent to a long list of people from a name and address database.

For all you budding artists, GeoPaint tries to become the friendliest of all graphic editors available on the 8 bit machines. Utilising a familiar and now almost industry standard icon and pointer system, you have loads of pixel power at the click of a mouse. Yes I know you could use a joystick, but who in his right mind would not benefit from a 1351 mouse, it allows you more "feel" and control over details. Text can be added to your pictures to give notations. Graphic shapes, circles, elipses, boxes, polygons can be drawn and filled with a variety of 32 different patterns. Although there are 16 colours if you switch to 40 columns, in 80 columns there is just black and white and the shades in between; however greater resolution is possible.

> ***"My personal views on the GEOS system are that it makes 8 bit machinery act like its 16 bit big brothers, maybe not so quick but just as friendly."***

Some of the power comes in the form of 32 brush shapes, the ability to invert, rotate and mirror images, a pixel editor, cut, copy and stretch commands give more power. An overlay effect, where two or more images can lay on top of each other is something else that's new adding even more power.

As if all this was not enough there is a disk turbo incorporated called PLUS disk Turbo that speeds up applications five to seven times helping to further improve the system.

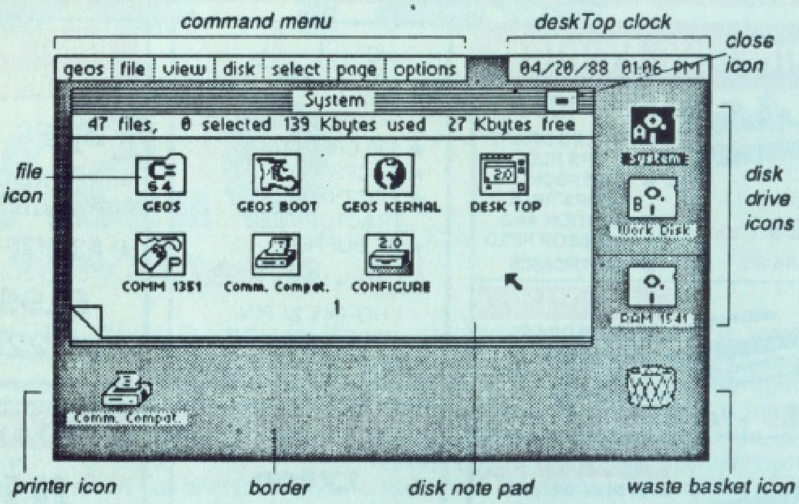
My personal views on the GEOS system are that it makes 8 bit machinery act like its 16 bit big brothers, maybe not so quick but just as friendly. Users can quite easily get to understand how to operate and use all GEOS products. There is now a huge range of utility software that is fully compatible making this the most powerful environment for C128 owners. If you haven't yet experienced this system then you are not getting the best from your machine. If you have the earlier versions then there is just enough that is new to encourage you to upgrade.

B.C.

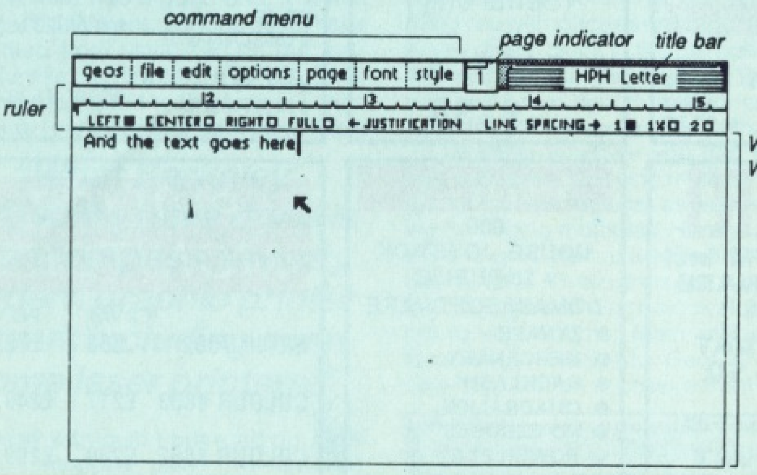
Price:£49.95 . Contact: Financial System Software, 18 High Street, Pershore. WORCS WR10 1BG. Tel:0386 553153.

The deskTop Screen

The deskTop appears as follows:

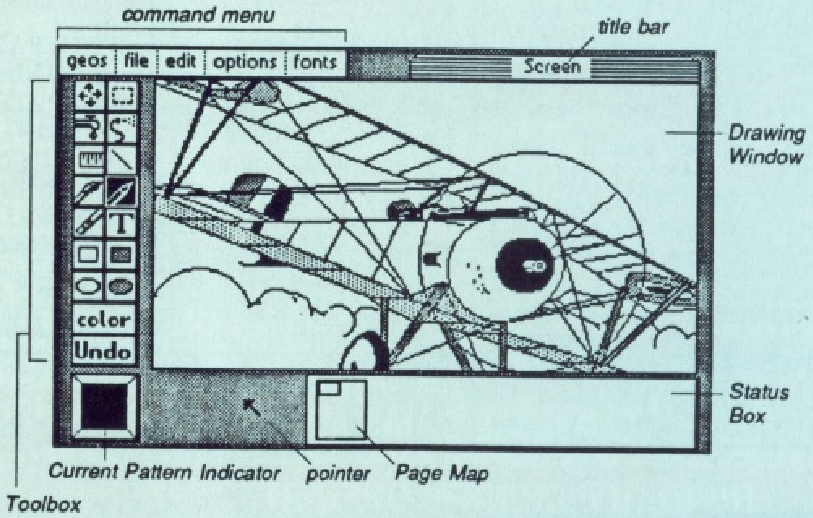

command menu
deskTop clock
close icon
geos
file
view
disk
select
page
options
04/20/88 01:06 PM
System
47 files, 0 selected 139 Kbytes used 27 Kbytes free
file icon
GEOS
GEOS BOOT
GEOS KERNAL
DESK TOP
COMM 1351
Comm. Compat.
CONFIGURE
1
System
Work Disk
RAM 1541
disk drive icons
Comm. Compat.
printer icon
border
disk note pad
waste basket icon

The geoWrite Screen


command menu
page indicator
title bar
geos
file
edit
options
page
font
style
1
HPH Letter
ruler
2
3
4
5
LEFT ■ CENTER □ RIGHT □ FULL □ ← JUSTIFICATION
LINE SPACING → 1 ■ 1½ □ 2 □
Writing Window

And the text goes here

The geoPaint Screen


command menu
title bar
geos
file
edit
options
fonts
Screen
T
color
Undo
Drawing Window
Status Box
Current Pattern Indicator
pointer
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INTERNATIONAL FONTPACK

Bob Collyer takes a creative look at the latest GEOS utility

GEOS HAS MANY DIFFERENT APPLICATIONS. ONE OF THE MOST IMPORTANT IS THE WYSIWYG WORD PROCESSOR. WITH THE WORLD WIDE APPEAL OF THIS SPLENDID UTILITY BERKELEY SOFTWORKS HAVE MADE UP SOME INTERNATIONAL FONTS, ROMA and UNIVERSITY FONTS .....
THESE FONTS CARRY ALL OF THE PECULIARITIES UNIQUE TO THE COUNTRY OF ORIGIN. BY THIS I MEAN THAT THERE IS A COMPLETE ALPHABET USED BY THAT COUNTRY. THE EUROPEAN COUNTRIES COVERED BY THIS RANGE ARE AS FOLLOWS :

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Superb 24 has that thirties style.

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Ormond 24 typical modern typeface.

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CHANNING must be one of the tallest and thinnest typefaces of the eighties.

Fort Knox from the U.S.A.

Durant sweet success in the making here.

Harmon looks strong enough to last.

Elmwood has a small body but its head is well up in the clouds don't you think?

Hearst is another international success typeface

Boalt 12 looks like a bold young man ideed.

University on the other hand looks tall, slender and delicate to the educated eye.

BRENNANS HOWEVER HAS THE REAL MEDIEVAL LOOK.

Roma has the Italian passion to decorate any document and give it feeling.

California is a typeface similar to the State itself. Bright clear and very full of itself.

Telegraph has to be one of the funniest typefaces.

Tolman however looks rather casual, see.

FONTPACK is available from: 18 High Street, Worcs. WR10 1BG. Price 16.95
Financial Systems Software, PERSHORE, Tel 0386 553153

B C

THE PERSONAL COMPUTER SHOW

The biggest consumer computer event of the year has just taken place at London's Earls Court Exhibition Centre. *CCI* sent a team to cover the multiple attractions of business, productivity and home computing displayed there. Anthony Mael, Carrie Beecroft, Simon Power and Tony Horgan report.

Commodore again had an action packed stand at the PC Show where the star attractions were the Christmas bundles for the Amiga 500 and the Commodore C64. Based on the "Batman the Movie" game from the games market leaders Ocean, this is the first time in the history of leisure computing, says CBM, that a major game has been bundled with a computer and launched to the public at the same time. In the pack too comes the highly acclaimed Deluxe Paint II and the successful flight simulator F-16 Interceptor - both from Electronic Arts. For Arcade fans, Commodore have also included The New Zealand story from Ocean. This Batman pack will no doubt ensure that the Amiga 500 continues to enhance Commodore's leading position in the market. The Amiga 500 Batman Pack is priced at £399.00 and will be available by the time this magazine reaches you.

Commodore are also tripping the Light Fantastic with their new package for the C64. Together with the Commodore C64, the Light Fantastic pack includes a 1530 Dataset, a Cheetah 3-D light gun called The Defender, 3-D glasses plus Time Traveller, Gangster and Army Days- three specially developed Mindscape games- Blaze Out from Ocean, Mike Read's Pop Quiz, & Batman the Caped Crusader, also from Ocean. Educationally the pack offers Pitman Typing Tutor, Music Package, Paint Package, and an Arcade Construction kit from Domark. The Light Fantastic offers an excellent product mix bringing exclusive software to the market and further expanding the everlasting appeal of the Commodore C64. Retailing at £149.99 for the pack, or £39.99 for the software alone, no doubt the Light Fantastic Pack will be the biggest selling 8-bit product this Christmas. Commodore have always made clear their commitment to the leisure industry, and also their concentration on the younger generation, at least in terms of the A500 and the C64. Both the new Christmas packs indicate that computing for the younger generation is still a priority, although with the addition of the creative and educational software it appears that Commodore is aiming at a more general family appeal. Shoot 'em up games are, after all, not included in most parental priorities.

Commodore therefore hopes to control the games market, but what of the other computer areas such as education and business? Here it is recognised that the hardware that makes the Amiga the best games machine in the world is the platform which also makes it an excellent machine for other purposes. There, however, it is the A2000 that really comes into its element.

At the PC Show, the three most exciting developments in the Commodore field were respectively research, education and business centred. The most dramatic development involving the Amiga was the invention of a 4-D ultra-sound heart scanner which uses time as the fourth dimension in order to create an animated image of the heart for medical diagnostics. The high resolution graphics and other advantages of the Amiga 2000 make it the ideal vehicle for this exciting and important research. Harold Wilson, the guy responsible for the scanners creation, is a medical engineer from Imperial College, London (and no, he never was Prime Minister) was at the Show to give me a run through of the operating principles. Essentially, these are quite straight for-

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ward and depend on the high resolution graphics, open access system, multitasking and multiproccessing. There are many important benefits of this newly developed scanner, which incidentally won the 1989 National Westminster Bank/ BP Award for Technology despite the fact that the project had only been running for one year. Present ultra-sound scanners run on 2 dimensional scans which rely on cross sections of the heart. The new Amiga equipment can take a 4-D animated scan of the heart, making it easier to detect abnormalities in the heart structure and in blood flow. The scanner could also be adapted for brain scanning with the addition of X-Ray equipment, and may also prove useful in the detection of cancer cells and related follow up treatments. One final point; the Amiga scanner, including software, can sell for around £25,000 compared to £80,000 for present scanning equipment.

Another interesting development on the Commodore stand was the Training and Presentation system produced by Computerised Training Systems. This interactive, integrated system puts the presenter in control of information technology designed to achieve maximum effectiveness. Audio, video, live sound and pictures, slides and overheads are all fed into the computer and controlled by the presenter by moving the mouse. The Amiga was the ideal computing tool because of the high quality graphics, large memory capability, open access system, multiprocessing capability, and of course, economy. A program for children has also been developed which involves slides and an accompanying voice.

The system is very simple to operate and thus allows trainers to concentrate on their training rather than production. The system can be extended to a comprehensive student system if required, allowing students to develop in depth knowledge and skills at their own pace.

On the business front the Small Business Manager is a stand alone, easy-to-use software system comprising 5 essential business packages. The Options package allows you to enter your company details, VAT rate and other details particular to your hardware configuration. The Invoices package allows access to customer/ delivery database and produces invoices, copy notes and credit notes. The Stockbook produces lists of stock and is informed from the invoices package of any items bought and sold. The Statements package produces a full customer ledger and statements. The VATbook stores inputs/outputs information. This Small Business Manager requires an Amiga 500 as the minimum system and at £99.00 is financially accessible to all small businesses.

Causing quite a sensation on the Commodore PC was a famous MSDos package on a large and terrifically clear monitor, showing two A4 pages at the same time, and proudly bearing a Commodore badge. Aldus Pagemaker 3, the Desktop publishing package, together with the new Aiden 21 inch high resolution monitor, gave some impressive results. However, at £2388 for the monitor, it was not one for the uncommitted.

The Amiga graphics were of their usual outstanding quality, with demonstrations of DigiPaint being even more impressive on the high res. monitors.

With the most impressive stand at the show, including a private theatre where you could see everything on a constant programme, including The Bitmap Brothers of Xenon fame, it was altogether an excellent showing for Commodore. In terms of exciting new developments, the general opinion was that they had left their competitors behind, their massive two floor stand emphasizing their leadership of a wide area of the hardware market.

CB

PC SHOW ROUND UP...

Simon Power whizzes round the packed stands

The 1989 PC Show is said to have been the largest one yet in both the number of exhibitors and the number of visitors attending. With so many trade stands and so many new products on show it was practically impossible to have a good look at everything. I'm sure I must have mised many an interesting gadget or game being shown off.

The Central hall contained most of the large companies including the Commodore stand. Commodore launched their "Class of the 90's" educational package at the show which includes among other things, an Amiga 500, Deluxe Paint II and a copy of this magazine. To help schools in their mastering of the package Commodore have invested 500,000 in an educational team who will tour the school offering help and advice.

Granada Microcare who officially maintain all Commodore computers on behalf of CBM were present at the show. Granada have recently been involved in Commodore's announcement that all its PCs sold from now on will carry a one year maintenance free warranty.

Kuma Computers Ltd. had a variety of titles on show at the stand covering topics on the PC and Amiga. A special promotion was being held for their new K-Roget disk based Thesaurus. A review of which will shortly appear in AUI. A special price of 29.95 was being offered, usually the thesaurus costs £49.95.

The Computer Users Book Club which offers members a 25% discount on all titles were at the show displaying a variety of their new books. Membership to this club is free, and all books are dispatched first class as soon as the order is received.

The Business hall was where one could find the best professional software and hardware available. Marconi Electrnic Devices launched their KB35 trackerball at the show. Available for the Amiga and PC the trackerball will assist in educational programs as well as intricate graphic design work. Priced at around £150, the trackerball should soon be appearing in many offices and schools around the country.

Wordperfect UK who recently changed their name (to Wordperfect!) had Wordperfect for the Amiga and PC. Wordperfect were running regular style presentations showing Data perfect, their Wordperfect office and PlanPerfect for the PC.

John Wiley and Sons Ltd has a range of books covering various Amiga topics. Wiley's books are known for the practical way in which they deal with complicated subject matter.

Equinox Business Systems had their business software being put through its paces. The Equinox Organiser which is said by Equinox to have a wider scope than most organiser packages was also being shown, and is available for the PC.

The Bank of Scotland and the Royal Bank of Scotland both had their home banking units on display. The Home and Office Banking Service (HOBS), which belongs to the Bank of Scotland, functions with most PCs and has the ability to instruct payment to third parties and facilities to transfer funds between accounts on a same day basis. The Royal Bank of Scotland launched their unit two years ago. Named Royline, it offers the same facilities as the Bank of Scotland but claims to be growing at a faster rate than any of the top four banks.

PET computer services, who are based in Singapore, and have absolutely nothing to do with the PET, were at the show wishing to meet distributors, importers and buyers who might be interested in purchasing their 'Sherry' range of DTP packages. Why they are called 'PET' and not 'SHERRY', nobody seems to know!

The Leisure Hall contained most of the big names in entertainment. Ocean made good use of their allocated space by erecting a large video screen to promote their new releases. Batman was without the game that people came to see, and Ocean had supplied two 1950s Cadillacs to set the scene.

Domark, whose latest release Trivial Pursuit (featured on page 40 of this *AUI*) looks set to make a big hit with the computer board game players. Fantavision, Broderbund's animation package, also attracted a large crowd around the monitor running in its dome. Fantavision has recently been upgraded for the Amiga.

CDS had a new striptease game at the Show, as well as their latest chess program – Collossus Chess X – CDS call this the 'Ultimate Chess Program' – They will probably say the same for XI... Accolade were also present, along with Rainbow Arts, Gremlin Graphics, Ubisoft, Virgin, Activision, Titus and U.S. Gold to name but a few.

Various oddities could be noted at the Show including the Red Star stand. We know Red Star offer a delivery service using the rail network, but as for their reason for being at the PC Show, nobody could tell. The Encyclopaedia Britannica also had a stand at the Show. Maybe a computer version was available? Maybe a computer version was planned? Alas, no. The Encyclopaedia Britannica will in the mean time stay in its paper form. Just another of the mysteries that the huge show failed to solve.

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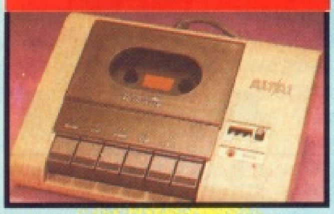

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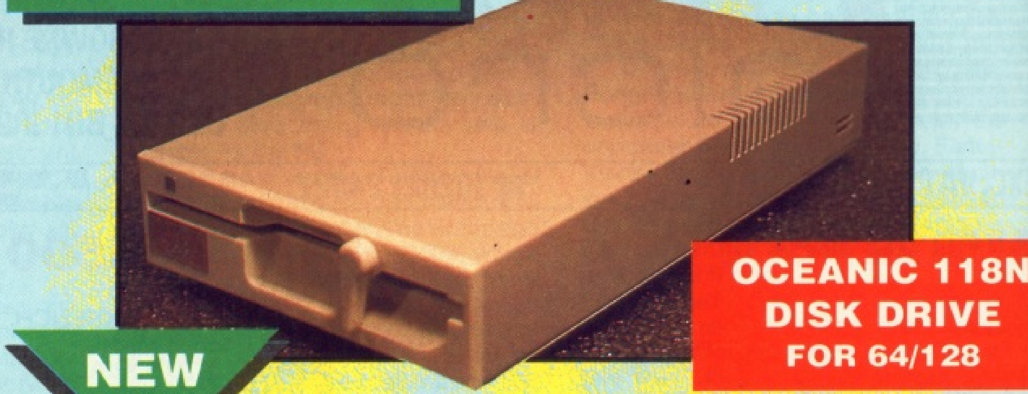

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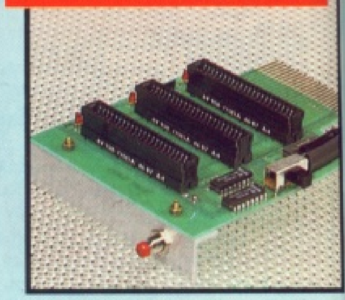

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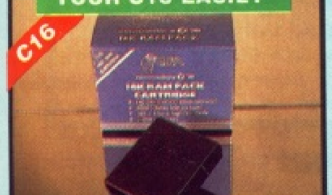

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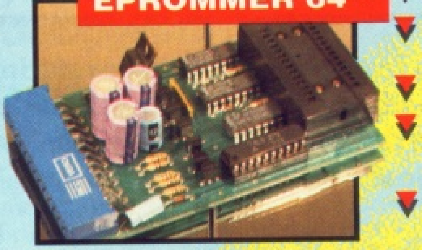

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1. Pollution from coal-fired power stations is a major cause of acid-rain, which in turn leads to "die-back" in otherwise healthy forests. Greenpeace helped persuade the government to spend how much on the cleaning of these aerial discharges?

   a) £6 million?
   b) £60 million
   c) £600 million?

2. Which everyday item is a major contributor to the depletion of the natural ozone layer?

3. Is the global warming known as "the greenhouse effect" caused by:

   a) low ozone levels in the atmosphere?
   b) pollutants in the atmosphere preventing heat from the sun leaving the earth?
   c) the melting of the polar ice-caps?

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More Power For Your 64

The Red Queen's Race

Considering a nine year old word processor, Jumpman, and the famous cartridge version of International Soccer, Peter Gerrard suggests that we may not have to run so fast just to stay where we are.

Do any of you remember *Alice's Adventures In Wonderland?* Or, to be a little more precise, *Through The Looking Glass,* the sequel that appeared seven years later? The stories were meant for children, I am sure, and were written because of the author's fascination with a young girl called Alice Liddell, the daughter of the head of the author's college. I read them when I was little, and re-read them years later, which I suppose goes to prove that their appeal (they were written in the late nineteenth century after all!) spans many years.

Lewis Carroll wrote some charming stuff in those two books, and in the Through The Looking Glass stories we encountered the Red Queen and her country. If you recall, one had to run as fast as one could merely to stay in the same place. It would have been an interesting race for Carl Lewis, Linford Christie, and the like. I don't think Ben Johnson would have got a look in. And, just by the by, wouldn't this be a great scenario to write an adventure game around, assuming that there were no problems with copyright?

The point that struck me, though, about the Red Queen and her land, is that many Commodore 64 owners seem to be going through the same sort of thing. Owners struggle so hard to buy all the latest gadgets, software, add-ons, in order to stay in the same place. They don't steal a march on anyone, they don't actually advance anywhere, they just remain exactly as they were.

Say a new word processing package comes out, with a thousand and one features that you decide you cannot do without. The word processor that you have been using for years is just as good: it does the job it was bought for. A brilliant new arcade game comes out, with fabulous graphics of the sort never before seen on an 8-bit machine. All very well to have a look at it, but have you managed to get through every level of Jumpman yet? I have not! I am sure many of you have, but I have not, and there are probably plenty more who have not either.

To give another example. Programmers are forever pushing the limits of the 64 to the upmost, creating software that we would never have thought possible five years ago. And yet, it's the same machine, isn't it? Nobody's added any new chips to it, or anything like that, it's still the same good old 64 of years ago. New adventure games of ever increasing complexity continue to roll off the shelves, but there are still many, many games that I have never played to the end. I have never see the final messages, solved the last problems, and yet there I go with some new game that baffles me the minute I load it up.

I am not saying that people shouldn't write new software, heaven forbid, it's that sort of thing that helps to keep the 64 alive after all of these years. However, if I can argue from analogy (always a tricky business, I know, but I think the point's valid here), I prefer to holiday in the United Kingdom every year because there are so many parts of it that I have never visited. I can accept the views of people who want to travel further afield and trek across Nepal or saunter around Disneyland in Florida or take a look at Sydney Opera House (curse their cricket test team!) or spend a fortnight in the African bush, but there are still so many places in the U.K. that I have never seen that I shall continue to seek them out.

In other words, doing all this advancing to stay in the same place is one thing (three weeks in Hawaii is all

continued on page 30

continued from page 29

very well, but you have still got to get up and go to work on Monday morning when you get back!), but I just wonder if we might make more progress by looking back. Hindsight is a wonderful thing, a person arguing with hindsight is in a good position, and so much good stuff has come out for the 64 over the years that might have been overlooked, that I am sure that many 64 owners can add more power to their machine by considering software/hardware that already exists and has existed for some time, rather than forever venturing out into pastures new and running up huge overdrafts on packages that have so many new features but might not perform anything of any great advantage to the user.

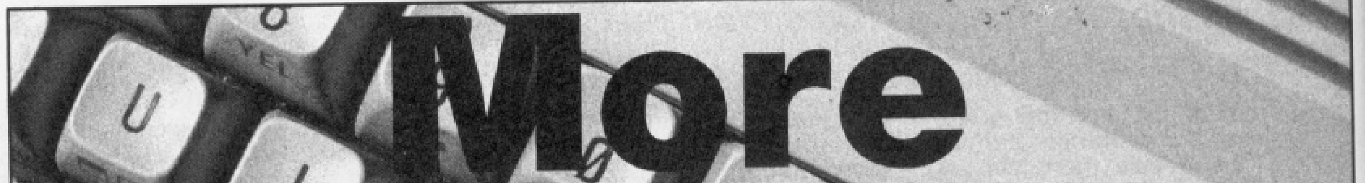
A regular advertiser in CCI, a company called Supersoft, are a case in point here. They had been producing software for Commodore computers since the year dot, or so it seems, and still continue to do so. Presumably they will be writing programs for the latest mega-machine well into the next century, even if they do come out under the Audiogenic wing. But what they tend to do is to get a good, well-established program like BusiCalc, a spreadsheet of relatively mature years, let's be honest, and convert it for every machine that comes out. Being a good, workmanlike product, it performs well on any computer, even though there is nothing especially new about it when it does appear. It is just a good program that has stood the test of time and which will probably still be being used many years from now.

They produce many other programs as well, not all of which are conversions of earlier products. They never did a synthesiser program for the Pet, for example, but did do one for the 64 which is still selling well many moons after its original release and despite the introduction of a great deal of other programs of the same sort in recent years. Talking about music and Pets, does anyone remember a thing called (I believe) Music Maker? No control over the envelope of the note, precious little control over anything, actually, but it provided happy hours of entertainment down in the cells that used to form my place of work. And if the then managing director's reading this, it was not "mucking about", it was research into software developments in the musical field! Well, perhaps not.

But that is a very old combination of software and hardware that could still find valuable use in the educational world (it printed notes and staves, or whatever they are, up on the screen as the piece was being played) that could easily be overlooked in the frantic dash for the latest synthesiser developments. Not without their place, of course, but it's so easy to neglect some of these older packages.

Another case in point came when I was writing an article recently (for another magazine, sorry) using a four year old word processor because I still think it's the easiest thing to get on with. This article, in fact, is set direct from disk, so the typesetters must like it as well. However, at one point I found myself wishing I was using a nine year old word processor. For reasons that need not bother us here, I wanted to convert a whole section of text from lower case to upper case. There was no way of doing it other than typing out the whole thing again. However, on that nine year old word processor I could have typed in a control character and started moving the cursor around, and everything that it passed over would have been instantly changed from lower case to upper case. Another control character would have allowed me to change it back again, if I had wanted to.

That package was called WordPro II, the second in a long family of word processors for the Commodore series of machines. Anyone looking for a word processor now could do far worse than search out a cheap copy of anything with WordPro followed by a number as the title (they were up to WordPro V when I was still at Commodore in 1981!) rather than buying a pocket version of some up-to-date word processor that would probably cost the same sort of



More Power For Your 64

price but which would only have a fraction of the features.

A great source, and a fairly inexpensive one at that, for this sort of software from bygone days which is still valid today, is ICPUG, the Independent Commodore Products Users' Group. Many, many people belong to ICPUG, and they usually feature somewhere along the way in each issue of CCI. There is generally some sort of equivalent organisation in most 'Commodore countries'. They have stacks of what is termed public domain software (i.e. free) which will only cost you the price of the disks that you would like it copied on. It is well worth sending off for a catalogue of all this software, which is conveniently divided up into different categories, and taking a look at just how much stuff is available.

> ***"There are, literally, thousands of programs in these catalogues, and whether your interest is in games or business, education or languages, there will be something of interest somewhere."***

There are, literally, thousands of programs in these catalogues, and whether your interest is in games or business, education or languages, there will be something of interest somewhere. I have even seen things like compilers mentioned from time to time, which might be worth exploring. If you are interested in adventure games, as I am, there are dozens of them to try your hand at. And since you are not buying from a company that has just spent a fortune on acquiring the license to a popular character or film in order to be able to produce a game bearing their name somewhere in the title, you will not be playing an inflated price for it all, either.

What you will not get is something like Commodore's original International Soccer cartridge, still to my mind one of the great games for the 64 and unlikely to be surpassed by anything. I know the graphics are not that good in terms of today's developments, and I know that the sound is next to non-existent, but that cartridge has proved to be one of the grand sellers of all time. Quite rightly so, as it was a highly innovative piece of software when it first appeared and it still stands up well today.

I think the same also applies to the aforementioned Jumpman. Again, by today's standards, the graphics are not brilliant and the sound is pretty pathetic, but for sheer gameplay it still scores over many of its newer rivals. It is a simple platforms and ladders game, really, which was all quite new at the time when I first saw it (early '80s) but is an idea that has now been used by so many companies that I am sure we have all lost count. However, it is still great fun to play and, as I said earlier, I still have not finished it through to the final level. I believe, years ago, that a follow-up was produced on cartridge, although I never actually saw it. I presume it was just more of the same, but the twenty-odd levels of the original were enough for me.

So, by all means buy and use the latest software if that is what best suits your needs, but don't overlook the history of the 64, which has seen some tremendous stuff produced over the years. Classic games, solid business products, and a whole host of weird and wonderful oddities that defy classification, it's all there if you look for it hard enough.

More power to your elbow then, and I wonder if some of us might be able to beat the Red Queen and move forward by going backwards? You never know!

P.G.

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Yes, budding pornographic adventurers. We can boast(and we often do) that coming direct from the U.S.A. we have a pouch (sorry –Package) containing fifty copies of this titilating game all of which have to be won uniquely by _CCI_ readers!!!!! (That's if the customs don't grab it as they did with the prequel)

Before you unlock your chains and lay down your whips to run to your local stockist to buy a copy, try your hand at answering the questions below. You could be one of FIFTY lucky readers who will receive a copy of this game!!!!! (The answers to the questions are all in this _CCI_)

QUESTIONS:

1. Name Free Spirit Software's first erotic adventure ?
2. What is the name given to the spaceship in Planet of Lust?
3. Who owns this spaceship ?
4. What is the name of the doctor in Planet of Lust ?
5. In no more than fifteen words complete the following sentence: I'd enjoy playing Planet of Lust because....... (and it's got to be printable!)

All entries must be received by February 15th, on a postcard sent to:

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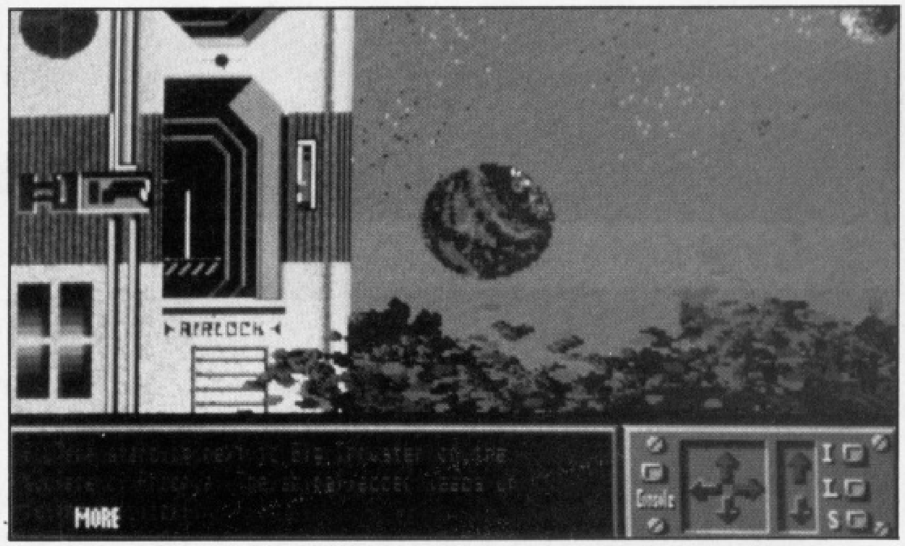
The winners will be drawn out of the Comp Sack that day.

Planet of Lust

Free Spirit Software

Planet Of Lust is the sequel to Free Spirit's other piece of erotic programming, Sex Vixens From Space. Brad Stallion returns in his space ship 'Big Thruster' (it gets worse!). In this text/graphic adventure Brad must travel to Erotiac which holds the dubious honour of being the Pleasure Planet of the Galaxy. Apparently, the local rainfall includes elements which turn it into a powerful aphrodisiac (beats acid rain, anyway). How the planet survives economically and structurally is anybody's guess. It appears that the dastardly Dr. Dildo (told you it got worse, didn't I?) fancies himself as the ruler of the Universe. The Doc has encased Erotiac in a force field. If the Federated Government does not hand over the Mind Printer, their ultimate weapon, Dr.Dildo threatens to increase the force on the force field, crushing Erotiac - not that the inhabitants would notice. The Federated Government have sent for you, Brad Stallion, to thwart the evil Doctor.



The package contains two disks and a two page leaflet which serves as the documentation.

Loading up the adventure you are faced with the same console, seen in the first location of the original, of Big Thruster. In addition, however, is some reasonable music which plays in the background. The music can be switched off from within the program or by clicking on a ghetto-blaster seen in one of the graphics, which is a nice touch. The majority of commands are executed by clicking on the graphics. Operating switches, pressing buttons, caressing bodily parts - are all done via clicking with the mouse. Other commands such as toggling the music, loading and saving games are selected via a pop-up menu which runs along the base of the screen. Other menu commands include a printer command which will allow you to print out your progress as you play. A compass rosette can be clicked on to move around. You have the option of inputting words via the text/message window. However, it has to be said that the parser is absolutely terrible. It is very strict and will not accept complex phrases. The database of recognised words is very small too.

Banned!

Sex Vixens became well-known as the program which was prevented from entering the country because of its rather 'naughty' content. A classic piece of over enthusiasm from the authorities who should, in which case, ban half of Britain's newspaper tabloids which are just as provocative. Sex Vixens was also well known for its brilliant piece of box art which was so incredibly bad it would, probably, be hailed as a masterpiece of abstract, modern art. The in-game graphics were rather better - but not by much. This time both have been improved.

Playing this adventure is extremely frustrating. It reminds me of some of those early Quilled adventures, which date back to the early eighties when men were men and adventures showed no mercy.

The slightest mistake ends the game. You must then go through a rather tedious routine of restarting the adventure, disk swaps, etc all because of the frustrating aspects of the game the actual structure of the adventure, such as the puzzles - the lifeblood of any adventure - suffer to the extreme. Really, the only thing I can recommend about this adventure is the rather unusual plotline.

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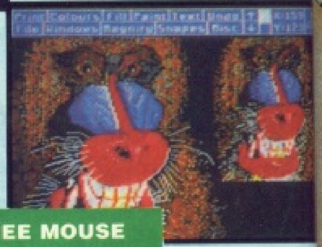

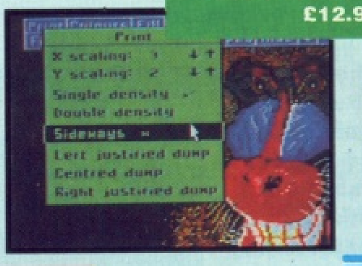

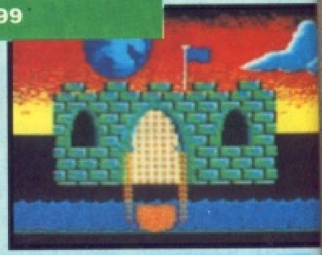

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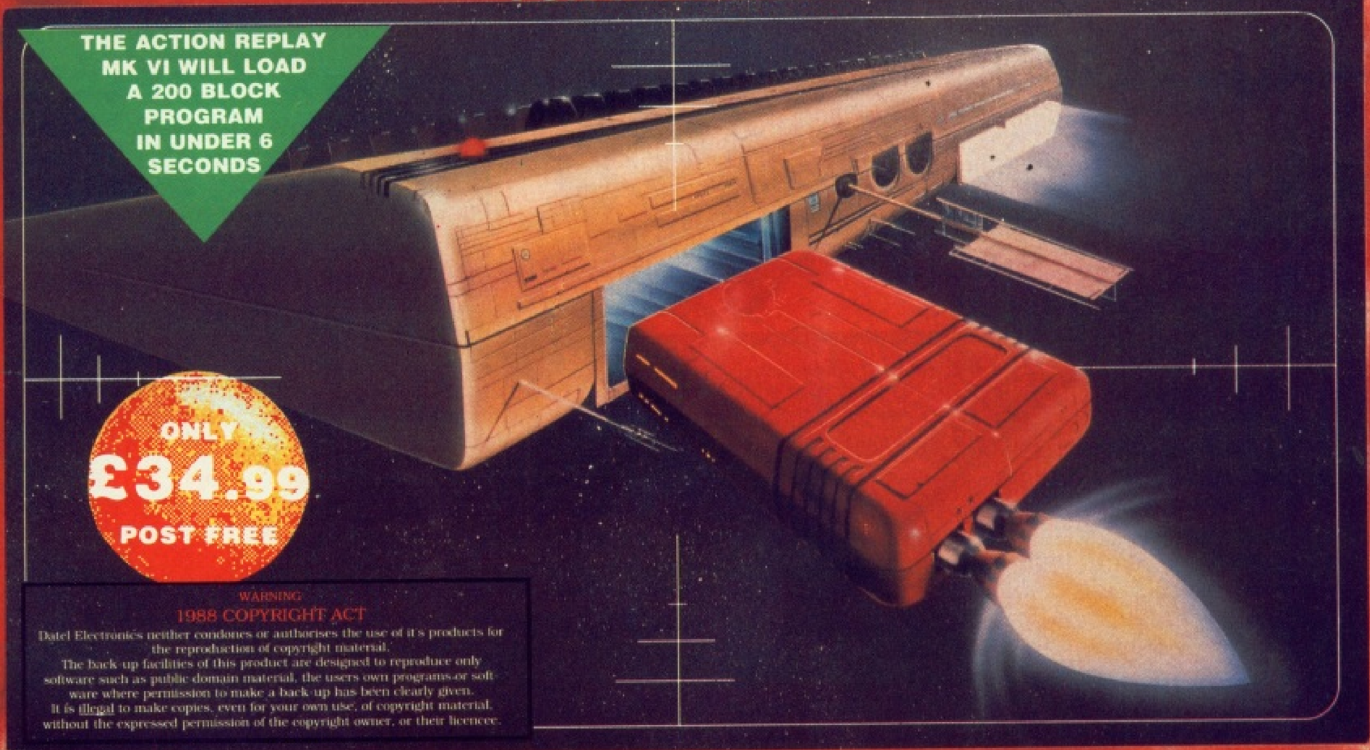

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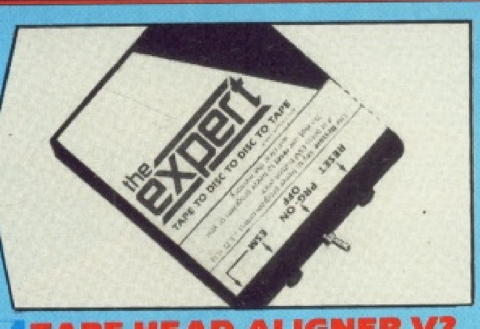

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Adventure

BY ANDY MOSS

IN THIS MONTH'S ADVENTURE SECTION I HAVE SACRIFICED SOME REVIEW SPACE ALONG WITH SOME OF YOUR LETTERS, TO CONCENTRATE ON THIS YEARS PC SHOW WHICH TOOK PLACE AT EARLS COURT IN LONDON.

THE GREAT PC SHOW ADVENTURE REPORT

And what a show it was this year for adventures! Whilst most people where fairly unimpressed with the latest offerings that were on show for arcade players, on the adventure front things were really buzzing. As I walked from stand to stand I was accosted by various industry tradesmen, who beckoned me towards their stalls and hastened me inside. Whereupon a doughnut was thrust into my mouth, a drink was shoved into one hand, and a press pack into the other, and with a 'just look at what we have adventure product.'

All the well known names were there, with the notable exception of Electronic Arts, who chose not to be, and Mirrorsoft both of whom did their bit in a hotel down the road aways.

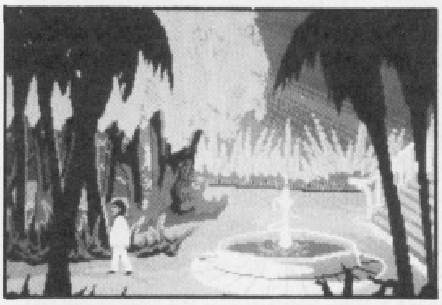
So after many hours of footslogging around just about every stand in the place, and partaking of too much free food and drink, here is your definitive adventure show report.

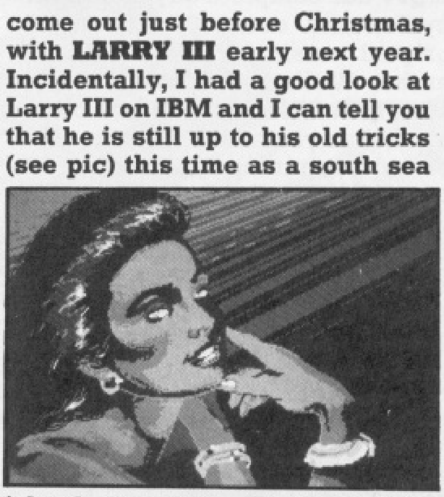
ACTIVISION

Activision has an impressive line up for the coming year, what with **GHOSTBUSTERS II**, and **DIE HARD**, but the star of the show no doubt about it is **COSMIC OSMO**, a wonderful experience for anyone who plays it. The only objective in this fabulous game is to explore and discover Osmos weird and wonderful solar system and all the strange planets that go with it. The planets have names like Vegetable Moon and Paper Planet, so you can imagine what is on the beautifully drawn screens can be examined in close up or opened (if that is possible) or animated. The puzzles are working out just where the links are hidden to reveal new passages to other locations.

There is no death or destruction, just a whole universe to explore and wonder at just how these incredibly talented programmers have managed to create such a innovative game. Currently, the game is only available on Apple Mac, but I am assured that it will be Commodore converted in the near future. **INFOCOM** had little to show that was OF TITAN, **written by Westwood Associates creators of Battletech. TITAN** is a moon of Saturn and consequently is a pretty cold place. You are Tom Jetland, a stranded space pilot who faces an uncertain future as he has to descend into the planets core to battle an unknown foe. A classic RPG scenario, you and your party must overcome many puzzles, and fitht many strange creatures in your quest.

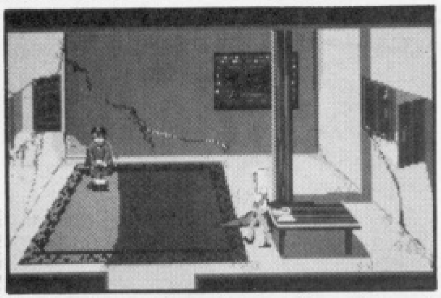
As far as **SIERRA** are concerned, there are more than a few adventures waiting to hit the streets, and these screen shots are the first your will see of them. All of these new titles have been developed on Sierra's new Amiga emulator, and contain much improved graphics and sound, so gone are those rather jerky blocky bleep productions we have had to put up with. **LEISURE SUIT LARRY II** if finally going to come out just before Christmas, with **LARRY III** early next year. Incidentally, I had a good look at Larry III on IBM and I can tell you that he is still up to his old tricks (see pic) this time as a south sea island runaway. However this time around you can play an alternative by switching roles


LEISURE SUIT LARRY III

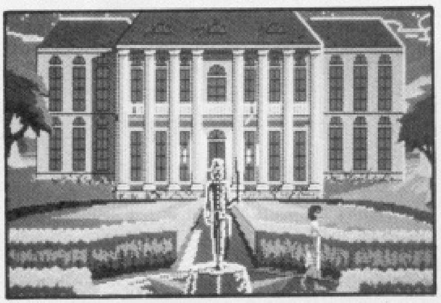

LEISURE SUIT LARRY III

mid game to Larry's lady love Passionate Patti who is on a quest to find out where the man she loves has run off to.

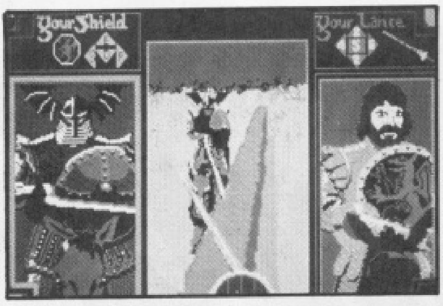
SPACE QUEST III is imminent, and once again Roger Wilco comes to the rescue, this time saving two acclaimed software authors from churning out dull, lifeless arcade games for a cutthroat software company! With proselike. Penetrate the Planet Pestulan and Pulverise the Puerile Pirates who hold our Programmers Prisoner'.


ICEMAN

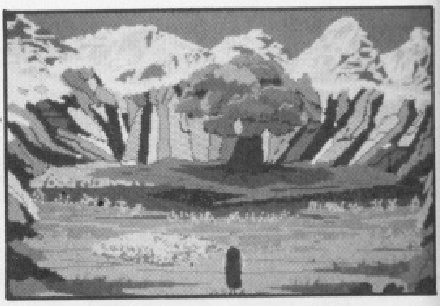
We are assured of a memorable finale to the trilogy. **KINGS QUEST IV** is billed as the largest computer game ever created. Rosella our heroine has to journey to faraway lands for the one item that can save her father from certain death. Written in real time KQIV has complete day and night cycles and over 40 minutes of orignal music written by Fame author William Goldstein. **MANHUNTER SAN FRANCISCO** once again has you as the alien undercover manhunter this time based in the City by the Bay. A number of enhanced routines ensure that this sequel lives up to its illustrious sister. Both first and third person viewpoints are used, along with all the famous landmarks from Frisco.


COLONEL'S BEQUEST

Following on from **POLICE QUEST II** which comes out next March, is **CODE NAME ICEMAN**, a 21st Century spy adventure, which incorporates a full submarine simulator. Roberta Williams, the creator of Kings Quest and overall boss at Sierra has also been hard at work on **THE COLONEL'S BEQUEST**. This is set in the 1920's and carries a definite Hitchcock type flavour, as you uncover a murder mystery deep in the bayous of Southern Louisiana. As an invited guest of Colonel Henri Kijon you hear that he is to bequeath his millions to one of the assembled guests. Needless to say that triggers a plot so complex it will keep you guessing for weeks we are promised! Other new titles are **CONQUESTS OF CAMELOT**, yet another Arthurian theme that both **INFOCOM** and **LEVEL 9** have dabbled in, **SORCERIAN**, a Japanese import that offers fifteen separate role playing adventures and ten speed scrolling and **HEROE'S QUEST** a construct-your-own-character-and-go-because-a-hero-type RPG that truly only lets you face problems when your character is capable enough.

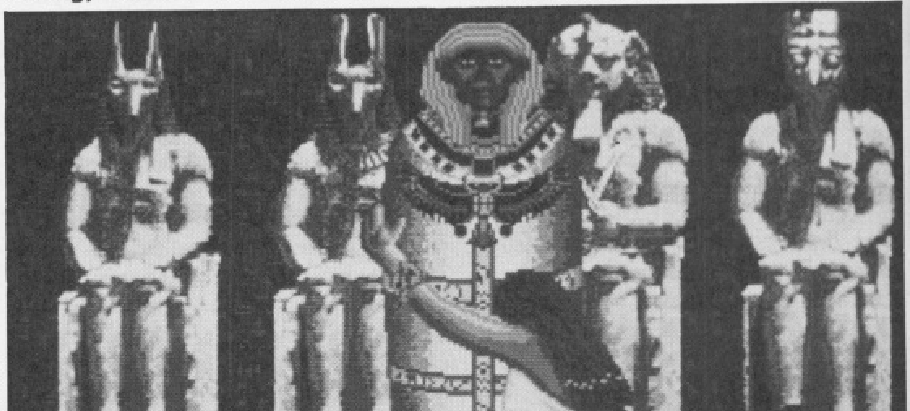


CONQUEST OF CAMELOT


HERO'S QUEST

RAINBOW ARTS

Next on my list was a first meeting with Rainbow Arts, who brought us **JOAN OF ARC** (now to be released at £9.99 as a budget 16 bit) and **JOURNEY TO THE CENTRE OF THE EARTH**. Three products look likely to set pulses racing, **DAYS OF THE PHARAOH**, is a **JOAN** type adventure set 3000 years ago, dealing in murder and mystery when rival Gods vie for the Pharaohs vacant throne. **MYSTERY OF THE MUMMY** is set in a museum that houses a recently excavated Mummy, which heralds some mysterious happenings and disappearances. Can you uncover the turth behind it all? **EAST V WEST** seems a strange title for a West German software company, particularly since you play the part of an American agent trying to track down an atomic bomb which has disappeared from a British airbase.


DAYS OF THE PHARAOH

US GOLD

Over at the Barons of Birmingham, things were very businesslike. The new AD&D release **DRAGONS OF FLAME** is due out on 64 at the end of this month. It includes both quest and wilderness mapping levels, and non player characters which boost

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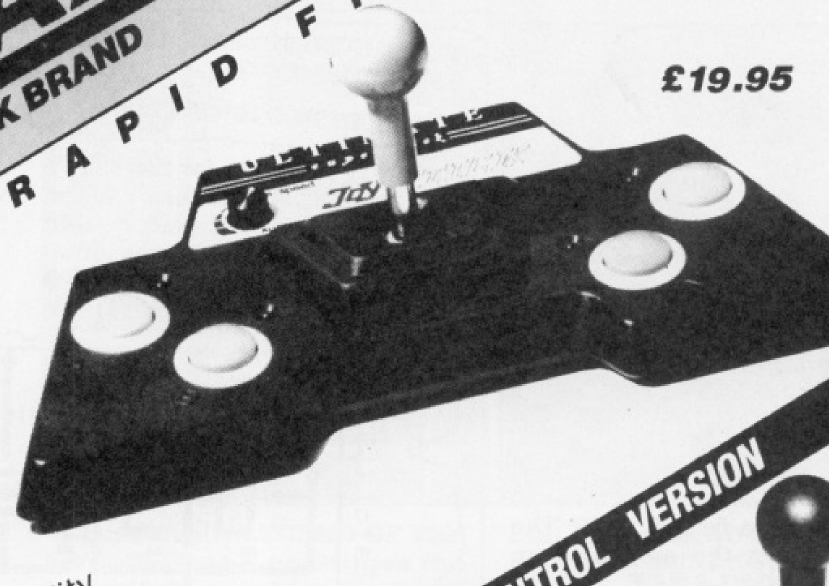

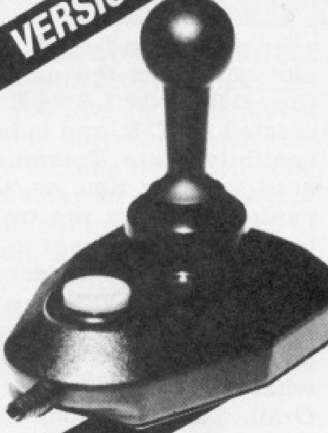

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EAST v WEST

your party size from 8 to 10. The plot continues the emphasis on the **DRAGONLANCE** series created by TSR, and is becoming healthily more Tolkenian as it goes on. This time as 'the Companions" are on the trail of the long lost Wyrmslayer to rekindle resistance to the Dracons.

INDIANA JONES The Graphic Adventure is a Lucasfilm product on the lines of **ZAK** McKraken, where the chase is on for the Holy Grail. Talking about **ZAK**, that will be out again along with **MANIAC MANSION** as US Gold have pinched the licence off Activision for all Lucasfilm games in the future. SSI are not to be forgotten, with **RED LIGHTNING** and **STAR COMMAND** due for early release.

MELBOURNE HOUSE

DEMONS TOMB Set in deep rural England, long forgotten terror stalks the countryside when an Egyptologist dies a hideous death working in an ancient tomb. The hunt is on to find his killer and prevent The Awakening ... A uniquely friendly interface and a powerful multi statement parser are promised.

ACCOLADE

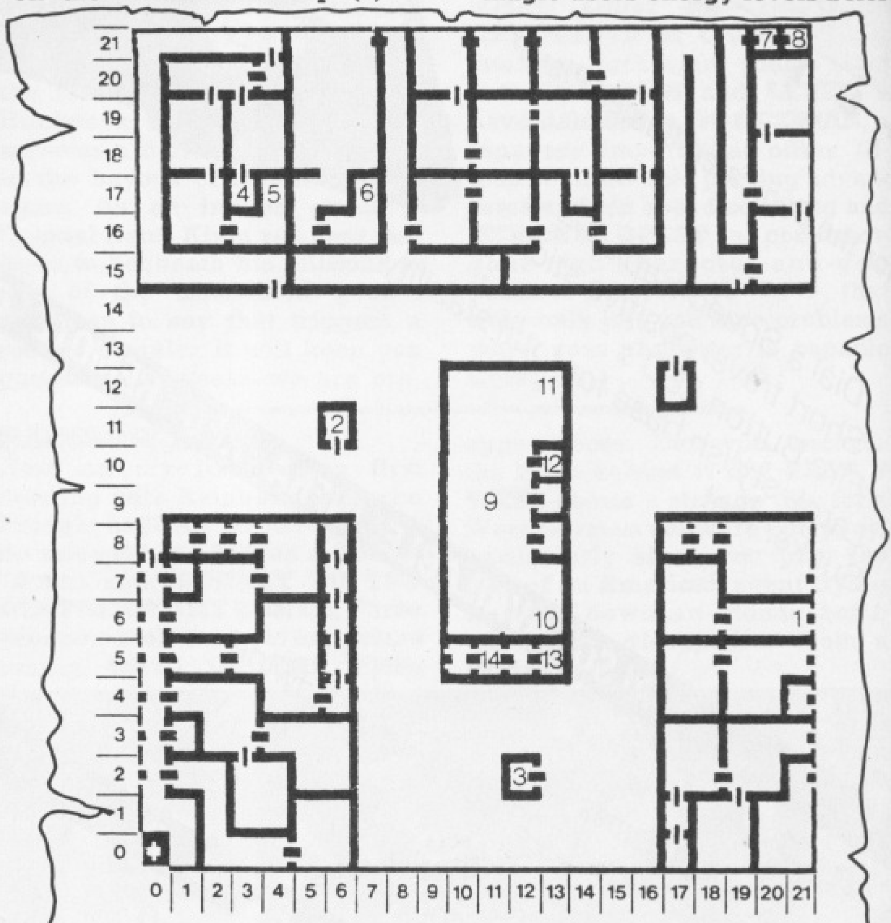
A cluster of goodies here, but the choicest seems to be **THE THIRD COURIER.** Your are Moondancer, the best secret agent in the free world. you are handed a critical mission, recapture NATO's stolen documents before they are sold to Moscow. Two of the three couriers who had the plans are now dead, now the trail leads to Berlin, to the third, can you get to him in time? Your character changed according to the occupation, background and lifestyle you choose. Rivetting stuff.

THE BARDS TALE II SOLUTION CONTINUED

FANSKARS CASTLE

The party departed for the Sage's hut in the wilderness. When questioned and well paid, he told us that Fanskars castle was located in the wilderness. Locating it on the wilderness map (8) we travelled there, and entered using the Master key Gethsah had. There is lots of wraparound magic here, and following one such path we came across a message (2) 'Far right and left is hazardous, when the time runs short, yet in the far corners is knowledge.' (3) We encountered a magic mouth saying 'The white shall lie and this knowledge shall be your answer.'

We went north (4) and came to a room where a voice said 'Fanskar guards the death snare with his very life.' (5) we used a teleport square and (6) and found ourselves in an L shaped room that led to a room that drained all our magic users energy levels before we could leave! (7) was a corridor of traps that led to Fanskar himself. He ws not pleased to see us and a great battle ensued, before we finally slayed him. However, our troubles far from being over had only just begun ... **FANSKARS CASTLE CONTINUED NEXT MONTH.**



FANSKAR'S CASTLE

ELECTRONIC ARTS

Although not at the show, I managed to glean some info from them. **SENTINEL WORLDS** is a magical futuristic role player, set in 3 planets for the answers.

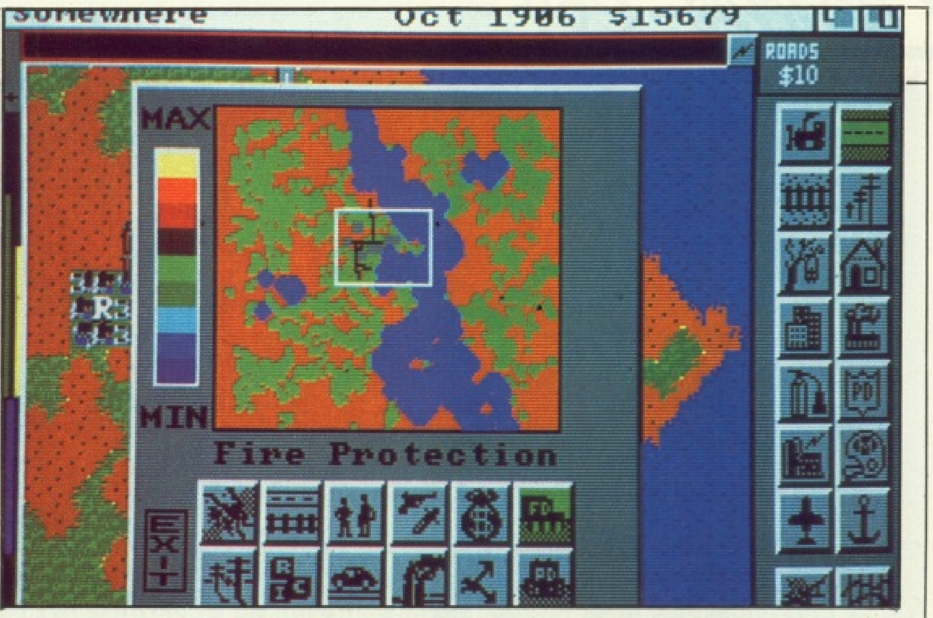
DRAGON WARS is a role player from INTERPLAY who by the look of it have penned another epic to rival the **BARDS TALE** saga. Set on the world of Oceana which is 85% sea, dotted with a few islands. The one good and kind king Drake has declared all magic illegal and started conquering surrounding islands in an effort to rule all Oceana. It is up to you to find out why magic has been banned, and to stop Drake.

LEVEL 9

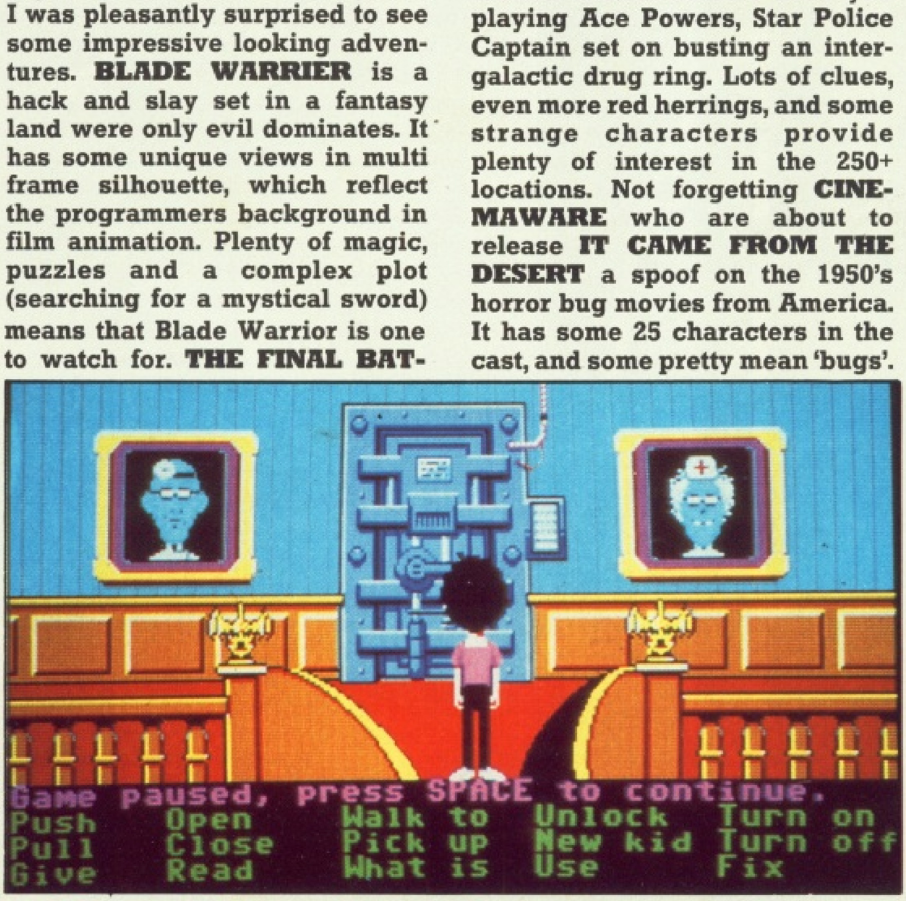
Pete Austin was in good voice as usual, and apart from describing his new home in Southampton, and telling me that Level 9 have signed up with another publisher whose name he would not divulge, he concentrated on their new solo adventure **SCAPEGHOST**, which will look similar to **ARTHUR**. What will be decididly different is their new system which has been 6 months in the making. This system will give all their games a Cinemaware-type feel with animation, digitised sound and, shock horror, an arcade type play! Fear not though, Level 9 games will all retain a strategic base, and plenty of data compression, they are just bringing the adventure to life, so to speak.

MIRRORSOFT

Mirrorsoft were proudly parading their catalogue for 89/90, and I was pleasantly surprised to see some impressive looking adventures. **BLADE WARRIER** is a hack and slay set in a fantasy land were only evil dominates. It has some unique views in multi frame silhouette, which reflect the programmers background in film animation. Plenty of magic, puzzles and a complex plot (searching for a mystical sword) means that Blade Warrior is one to watch for. **THE FINAL BATTLE** is actually **LEGEND OF THE SWORD II, and continues the beautiful graphical adventure that began with your party landing on the mysterious island. Suzar, has now escaped with the Sword, and you are improsoned in a torture chamber split from the rest of your party. A much larger vocabulary, more objects 3D views in each location and real time weather are promised this time around. THE OMNICROM CONSPIRACY** sees you playing Ace Powers, Star Police Captain set on busting an intergalactic drug ring. Lots of clues, even more red herrings, and some strange characters provide plenty of interest in the 250+ locations. Not forgetting **CINEMAWARE** who are about to release **IT CAME FROM THE DESERT** a spoof on the 1950's horror bug movies from America. It has some 25 characters in the cast, and some pretty mean 'bugs'.



SIM CITY


Game paused, press SPACE to continue.

MANIC MANSION

Last, comes **CHAOS** from FTL the sequal to **DUNGEON MASTER**. Initially planned as extra levels add on, but now completely rewritten to include new monsters, meaner levels and even a character portrait editor enabling you to change the appearance of your party. **CHAOS** will only work on a Dungeonmaster saved game disk, and it is recommended that the saved party be as strong as possible.

INFOGRAMMES

Last but not least the French adventure house has some impressive new titles, the best seems to be **SIM CITY** a realistic planning game that doesn't stop at the building of cities, that is just the start. As mayor you will need to run the place as profitably as possible, but those roads need to be maintained, the airport needs to be built, and what about increasing the police force? **NORTH AND SOUTH** is based on the American Civil war, **MURDERS IN VENICE** is now finished (review next month) along with **QUEST FOR THE TIME BIRD** (also next month).

If I have left anyone out please contact me and I will put you in next month. Phew what a week!

THAT'S IT FOR THIS MONTH, AS YOU CAN SEE WE HVE QUITE A LOT TO LOOK FORWARD TO OVER THE COMING YEAR, AND MAKE NO MISTAKE YOU WILL READ ABOUT ALL OF IT HERE FIRST. NEXT ISSUE IS BACK TO NORMAL WITH ALL YOUR LETTERS AND SOME MEATY REVIEWS.

A.M.

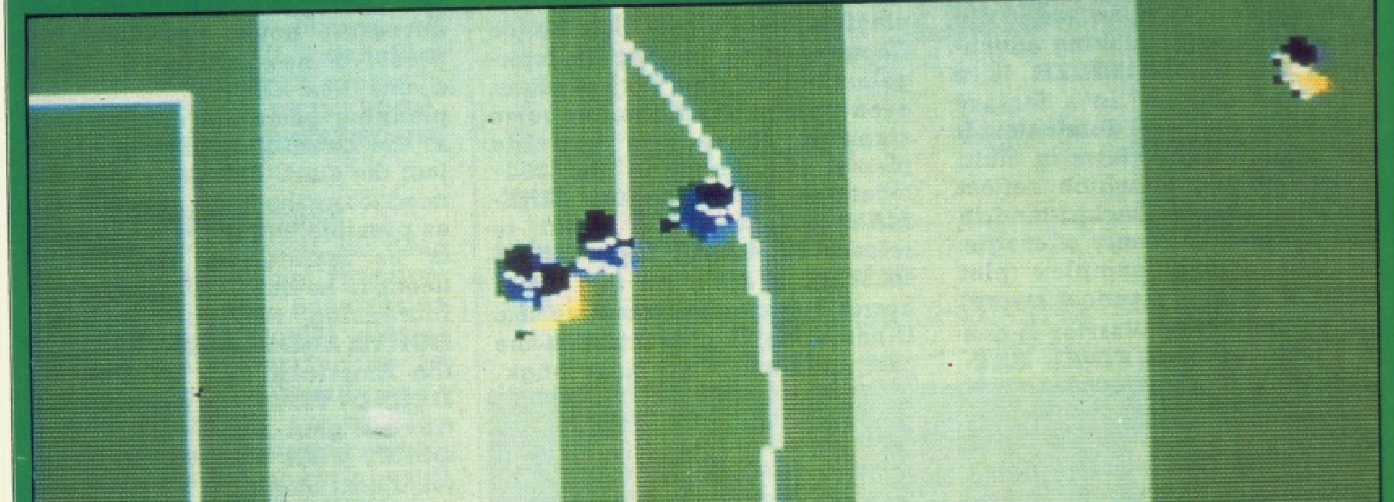
Kick Off

Anco

Everyone loves a game of Kick Off. The only problem was that until now, you needed a 16-bit machine to play it. That is no longer a problem, as Anco have now released Kick Off on the 64.

At a glance, Kick Off looks like any other footie game. When the Amiga version arrived, I remember spending a couple of frustrating hours getting used to the strange controls. The big difference here is that the ball is always played a short way ahead of your player, so if you stop dead, the ball rolls on regardless. The second major difference in the game's control system concerns tackling. Pressing fire whilst approaching a player in possesion, starts a sliding tackle. Unlike other games, whether you tackle cleanly, or foul the player, is up to you. This gives the player far more influence over the game, and also gives you the option of bringing down an opponent. However, fouls are penalised, and often lead to red cards, although the sixteen referees vary from over-zealous to blind.

Corners present you with nine courses of action, including an effective banana shot from the flag. Goalies are computer-controlled for most of the match, showing split-second reactions with stunning saves. Control switches to the player when it comes to penalties. The slower overall speed of the 64 version makes saving penalties a far more realistic prospect than with the Amiga. A random cross-wind in the Amiga version ruled out many of the predictable patterns that tend to form in footie sims,



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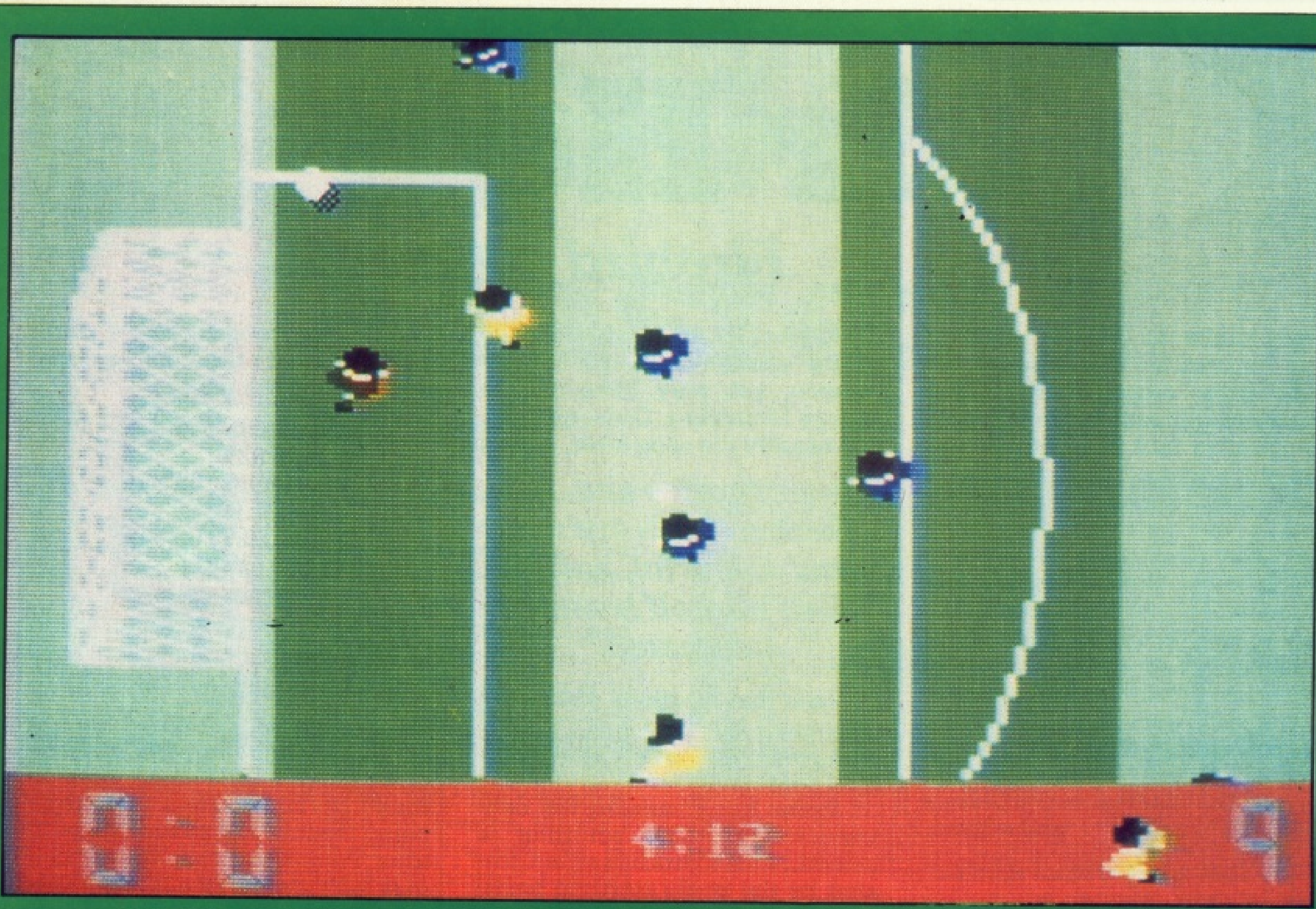
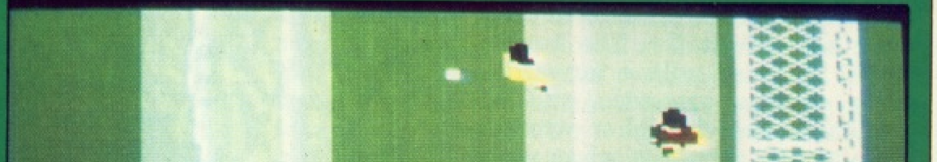


and also introduced a bit of luck into the game. That, among other features, has disappered in the conversion.

The fast, realistic ball movement is another of the original's better points which has been lost. Imagine playing football with a tennis ball on a velcro pitch; that's how it feels in the 64 game. Programmers have been smooth-scrolling the 64 almost since its launch, but programmer John Mitchell has failed here to live up to the highest standards. He has also been unsuccessful in capturing the frantic pace of the original, which somewhat detracts from the gameplay. A neat little hi-res overlay, as seen in Microprose Soccer, could have emultated the original's sprites perfectly. Instead the players are just a confused mess of pixels. Maybe it was too much to expect the odd sampled crowd cheer, but the absence of even a SIB-generated crowd effect is very disappointing. In fact there are only two sound effects in the whole game.

Had the 64 game been treated to a similar level of programming as the Amiga version, an almost perfect conversion would have resulted. After hearing, and seeing how much Anco put into the development of the original, hopes were high. To see such opportunity flushed down the toilet is saddening. But at least it is available to those 8 Bit owners who have been waiting since it received such general and overwhleming and completley justified plaudits on the Amiga.

Graphics:	**30%**
Sound:	**5%**
Playability:	**34%**
Overall:	**31%**
Price:	**£9.99 (cass)** **£14.99 (disk)**



Mr Heli

Firebird

Thanks to a mad scientist known as "The Muddy", the only other known life-supporting planet in the universe is about to fold in on itself. The crazed egghead has amassed a large following, who are determined to see their plans go ahead smoothly. Obviously they would make a few enemies in the destruction of the planet's natural balance, so precautions have been taken; precautions which come in the shape of surface-to-air missile launchers, gunships and armed robot guards. The peaceloving populace don't have a chance of saving themselves, so the Cosmic Heli Patrol decide to lend a hand.

"What is special about this chopper is its near-human characteristics, which extend as far as its ability to walk as well as fly."

To be more precise, the Heli Patrol have lent this dying planet one of their best choppers. What is special about this chopper is its near-human characteristics, which extend as far as its ability to walk as well as fly. The basic model is armed with a forward-firing cannon, grenades, and a vertical rocket launcher which replaces the grenades when airborne. Together these cover all angles of attack, but the enemies can still give you a spot of bother. These neatly drawn, but rather abstract aliens have a habit of hanging on your tail, gradually boxing you in with a series of slow-moving missiles. Help is at hand from the many crystals embedded in the abundant crumbly rocks. These can be used to upgrade your arsenal, adding extra missiles and bombs, or topping up your energy level. The trouble is, while you are digging out the valuable 500 credit crystals, you are a sitting duck for the enemy. So, often when you do amass enough cash for a new weapon, you only have a little energy remaining. Consequently, you usually die soon after, and as all cash and weapons disappear with each life (you can't take it with you!!), you have to start again from scratch.

"Sprites and backgrounds are neat and colourful, and Mr Heli himself is nicely animated."

Probe have handled the conversion well. The scrolling is smooth, with a parallax effect created by the static starfield background. Sprites and backgrounds are neat and colourful, and Mr Heli himself is nicely animated. The Maniacs of Noise have supplied the soundtrack, which can be turned off in preference to some surprisingly good sound effects. The game itself however, is just a bit jaded. There is nothing new to be seen, and hence little curiosity as to what lies ahead. It will look good in the programmer's portfolio, but I don't think I'll be coming back to it too often.

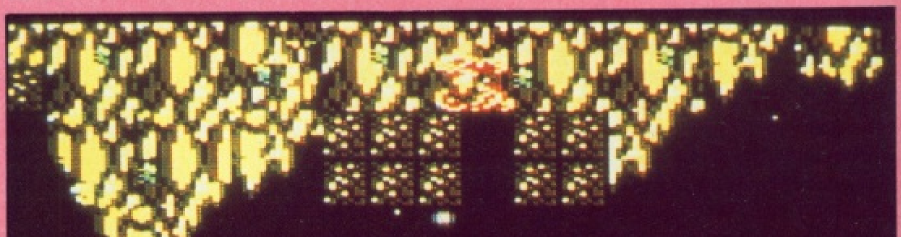
T.H.

Graphics: 78%
Sound: 82%
Playability: 67%
Overall: 69%
Price: £9.99 (cass)
£12.99 (disk)

Amiga

Unlike the full-screen, smooth scrolling 64 version, Mr Heli on the Amiga is crammed into a small, slow moving window. The game plays a little easier than on the 64, but suffers from a lethargic pace. Despite the reduced scroll-area, the sprites seem to be scaled for a full screen game, so the background scenery is somewhat constricting. Far from the accurate conversion it should have been.

Graphics: 60%
Sound: 67%
Playability: 61%
Overall: 59%
Price: £24.95



Cricket Master

Challenge Software

If you sit down and forget the real problems on the field of English Cricket, then you could take up the challenge from Challenge Software. You must Captain your side in a limited over International cricket match. The teams taking part are England, Australia, West Indies and New Zealand, you could also change these if you wish.

You have the choice of any side to captain or to play against. The number of overs between 40 and 60 you can, again, decide for yourself. There are three skill levels, I had no trouble winning a game at level one so I tried level three which gave me a tougher task but still I was able to beat the Aussies. Maybe I should have taken charge during the summer, or maybe David Gower should get himself Cricket Master to help re-think his strategy.

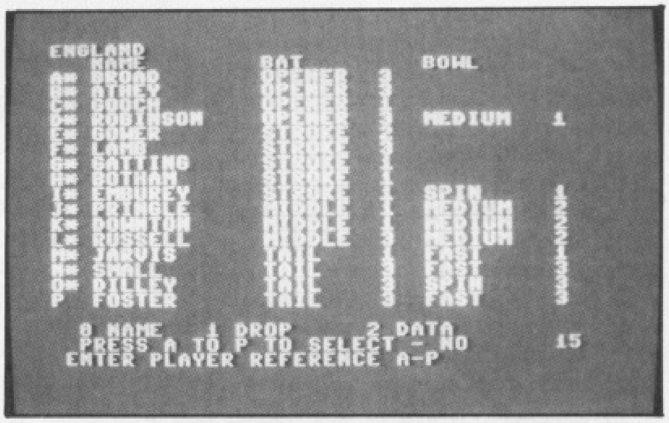
This game is all about strategy, there are no great animated arcade action screens, no cries of "howzzaatt!" and no musical ditty, pretty boring hey? The game compares well to the real thing. If you find cricket boring, then forget this game. If you love cricket then you surely will love this game; virtually all the aspects of the real game have been included.

You select your team from a squad of sixteen first class men, the names may be changed and brought up to date, those on the game reflect the teams as they stood at the end of 1988. Current players form is given so that you may pick the men who will perform well on the day. Cricket is always affected by the weather and this is brought into play as well. The conditions may vary even during the day, just as the weather does in the U.K.

There is a ball by ball commentary, a complete scoreboard and, if you have a printer linked up you can get a printout at the end of each innings. If you win the toss you can decide to bat or field first. Strategy comes into play straight away.

First put in your two best opening fast bowlers to take the shine off the ball. You set your field placings and tell the bowlers which line to bowl. Get these right and you will almost certainly start to take wickets. Later in the game, after the slower bowlers have taken out the middle order, you can send in the fast attack again to rip out the tail.

Once the batting side have ended their first innings it's your turn to bat. All the drama and tension of the game builds, you must keep a cool head as you try to beat their score. You have the choice of playing defensive, medium or attacking strokes.



```
ENGLAND
   NAME            BAT              BOWL
A* BROAD           OPENER   3
B* ATHEY           OPENER
C* GOOCH           OPENER
D* ROBINSON        OPENER           MEDIUM    1
E* GOWER           STROKE
F* LAMB            STROKE
G* GATTING         STROKE
H* BOTHAM          STROKE
I* EMBUREY         STROKE           SPIN      1
J* PRINGLE         MIDDLE           MEDIUM    2
K* DOWNTON         MIDDLE           MEDIUM    2
L* RUSSELL         MIDDLE           MEDIUM    2
M* JARVIS          TAIL     3       FAST      1
N* SMALL           TAIL     3       FAST      3
O* DILLEY          TAIL     3       SPIN      3
P  FOSTER          TAIL     3       FAST      3

  0 NAME    1 DROP      2 DATA
  PRESS A TO P TO SELECT - NO         15
 ENTER PLAYER REFERENCE A-P
```

As captain, you get to put in your batsmen in the order you see fit. The early overs must be defensive to play in the ball, later you can decide to open up the attack as you try to achieve the asking rate. This is the time where the excitement reaches its height, a win is possible in the last over and it becomes as exciting as the real game.

The game screen shows field placings and the state of the wicket, the outfield and the weather. You can see how the bowler places the ball on line, you can see where the batsmen are placing their shots and if they are attacking the bowling so you may need to change your tactics at the end of the over. This is not a game for the computer gamer who is hungry for fast action, this is for the real cricketing fanatic who, through the long dark winter months, can tune up his cricketing skills for the challenge as Cricket Master.

This game deserves to be given a place in the software library of anyone interested in cricket. It has a superb and extremely wide range of features and factors that govern the outcome of the game. So there you have it, there's no in between, you'll either love it or leave it.

B.C.

Graphics: 40%
Sound: N/A
Playability: 70%
Rating: CRISP
Price: £8.95 (cass)

OMEGA

Origin

Origin have been rather quiet lately due to the split with their UK distributors, Microprose. However, However, now that they have signed up with Mindscape things are on the move again with a string of new releases lined up.

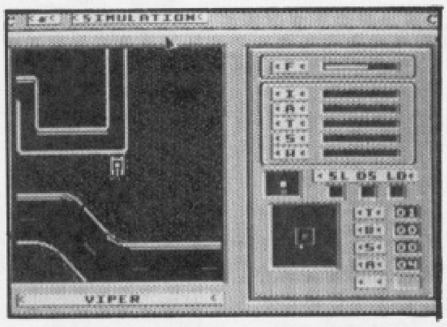
One new release that will have everyone buzzing when it finally hits the streets is Omega. A tank simulation with a difference. Not only do you have to design your tank, adding weapons and armour, etc, but you must design its artificial intelligence (AI) - as the tank is sent into battle under automatic control.

It is the AI design that sets Omega apart from every other piece of leisure software on the market today. Because you have to program the AI into the tank. Yes, program. As in Basic, FOR...-NEXT loops, IF...THEN conditions, etc. For those non-techies amongst you who are about to turn the page - STOP! Origin have catered for you too by including a series of pre-programed modules you piece together like a jigsaw.

You will recognise the seriousness of this product when you pick up, or try to pick up, the box - it is weighty stuff, indeed. Within the box are two disks (you will need to make a third play disk), a 24-page New Personnel Orientation Guide, a 13-page Reference Guide and a whopping great 268-page Cybertank Engineer's Handbook.

As well, you must design the tank's chassis, including its body class, drive system, fuel capacity, primary weapon and electronic instrumentation. All design features have to be 'bought' using your initial, meagre, budget.

You begin the game with a limited clearance rating of Standard (one of ten, within the game). If your tank proves to be efficient, after simulated combat, you will be promoted and given 1000 extra credits to use to design your tank. Thus you will now be able to afford better equipment. At the highest rating the company will consider your design for military applications.



After the chassis is designed you move onto the AI. Where you must program the tank using the Cybertank Command Language (CCL), which contains a fully-featured text-editor. As mentioned above, you do not have to start from scratch because the program already has a library of pre-programmed capsules which are self-contained segments of the CCL that perform isolated functions such as turning the tank 90 degrees, firing, etc. You can easily modify the library capsules to save time and aid the learning process. To help you visualise what CCL does here is a routine called HUNT.

As you can see, CCL has been designed to allow English to be incorporated within the program resulting in an easily understood set of code. In fact, Richard Garriot. (Lord British), founder and Vice-President of Origin was so proud of the language that he told me he was considering approaching some of the local colleges with a view to asking them to incorporate it as a learning tool, on an experimental basis.

When you have finally designed your tank you enter it into simulated automatic combat (although you can enter manual mode if you wish). The screen shows the battle area alongside damage reports of your tank as well as other useful information. New battlefields can be incorporated using the DIY designer. After initiating the battle, in normal automatic mode, you sit back and watch your carefully designed piece of high-tech machinery in action against computer controlled adversaries.

Origin have done an excellent job fitting Omega onto two disks. The AI programing function is superbly designed and well-implemented, I have only been able to scratch the surface of its capabilites. If you are considering learning a language you could do far worse than buy Omega for that purpose and no other. Which other language offers so much fun while you are learning it? Non-programers should not be put off by Omega's apparent technicality. However, the programming aspect is the crux to the whole game so only by using it to the full will you be able to appreciate the game in its entirity. My one reservation is that non-programmers, who only use the modules, may feel that much of their money is wasted. Even so, full marks to Origin for the high degree of innovation. My recommendation? *Buy it.*

Co-Operation ...

Talking about the design of Omega the author, Stuart Marks, commented,

'...it wasn't until the Summer of 1987, after Origin had agreed to publish the game, that cybernetics entered the picture. Later Richard Garriot, the author of the Ultima series, contributed a workable method of including manual control of the cybertanks and Paul Neurath came up with the idea for team play [where groups of, up to, seven tanks can fight each other]'.

Graphics: 68%
Sound: 72%
Playability: 85%
Overall: 86%
Price: TBA

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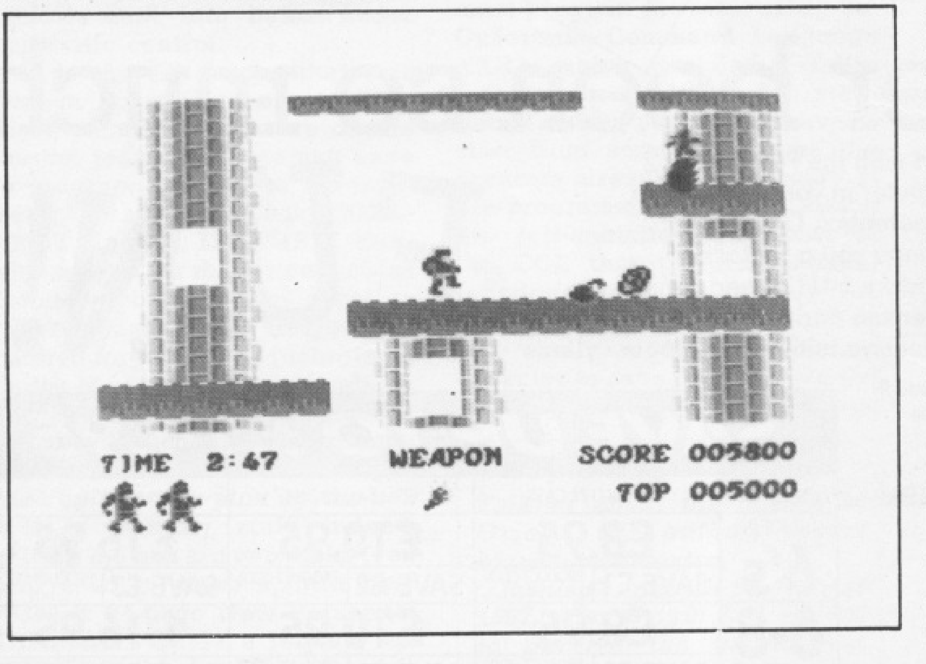


Ghosts 'n' Goblins

Ghosts 'n' Goblins (Encore) £1.99

Elite have been promising to re-release this classic for months, and now they have! It is a fantasy scrolling platform game, with you playing the part of a knight, out to rescue his princess from the evil overlord. Four respectably long levels have been taken from the Capcom coin-op, and squeezed into a single load. It begins in the graveyard, where zombies rise from their graves and venus fly-traps spit poisonous goo-balls. One touch from a nasty relieves you of your armour, leaving you in your boxer shorts. A second encounter killsa off a life. Graphics, music, sound effects and gameplay are all superb, and the levels are full of variety. At £1.99, you would be off your trolley to miss it!

Overall: 94%

Thundercats (Encore) £1.99

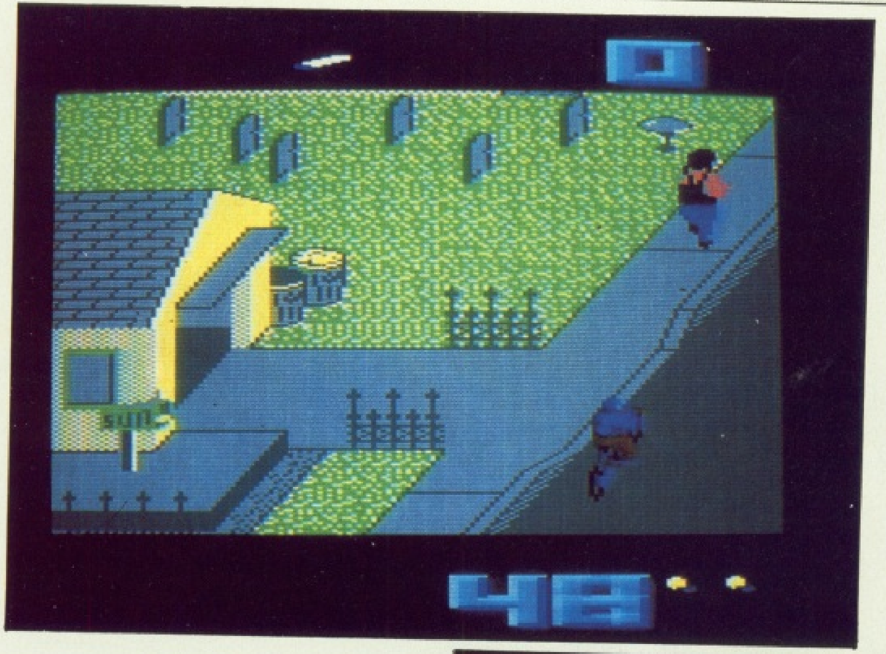
The production-line cartoon series spawned an equally uninspired computer game. It's a fairly simple two-way horizontally scrolling platform hack/beat/shoot 'em up, with a furry He-Man as the centrally character. Mumm-ra has stolen the Eye of Thundera, the jewel which is the source of the Thundercats' power. Some of the Thundercats were also taken prisoner, so you have the additional goal of rescuing your friends. It was written by Gargoyle Games, the team responsible for Tir Na Nog and Marsport. Far removed from these in-depth arcade adventures, Thundercats holds little entertainment for anyone other than a Thundercats fan.

Overall: 55%

Paperboy (Encore) £1.99

This was one of the last coin-ops to appear that could be described as original. It kits you out with a BMX, a sackful of newspapers, and sends you out on a hazardous paper round. The streets of this American suburb are full of feuding neighbours, stray dogs, irritating kids and nutty drivers. Your customers' are all coloured, whilst non-subscribers are identified by their drab grey dwellings. Customers are kept happy by prompt deliveries. Break the windows and wreck the gardens of non-subscribers to win over new cusa-

Thundercats



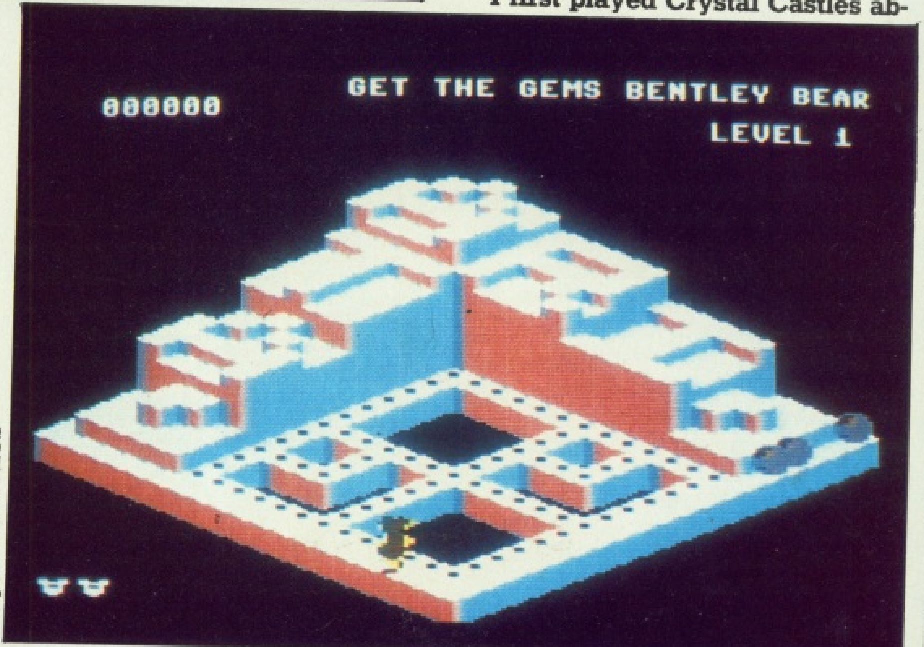
Paperboy

tomers. Sound and graphics are none too impressive, but the unique gameplay is fun.
Overall: 78%

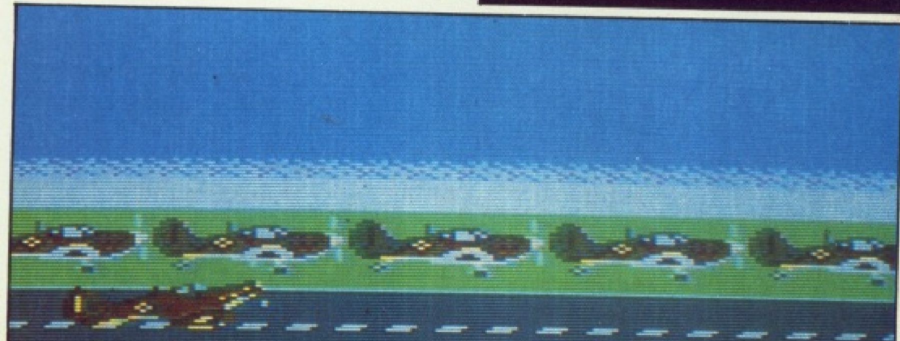
Spitfire (Encore) £1.99
"Chocks away Ginger (and all that rubbish)". As you would expect from a budget release, Spitfire is not a flight sim, but a scrolling shoot 'em up. You are a sole Spitfire pilot, scrambling to defend your airbase from the enemy. The battle rages over France and the English Channel, your prime targets being the rockets and their launch pads. Rather than simply scrolling left and right, you can also dive and climb as high as the cloudbase. This is essential if you are to take out the ground targets, and pulls the game above a plain scrolling blaster. It is still very simple, but not bad for the price.
Overall: 68%

Monty On The Run (Kixx) £2.99
The sequel to the game of the Miners' strike went down well in its day. Rob Hubbard was a new name on the scene, and his bouncy soundtrack helped boost the game's popularity. The Jet Set Willy-style gameplay could not be easier to pick up. As with the Willy series, wacky cartoony sprites lend the game a childish sense of humour. The format is old hat, but anyone new to the 64 will find it enjoyable.
Overall: 74%

Crystal Castles (Kixx) £2.99
I first played Crystal Castles about five years ago. It was fun at the time, but I never got that involved in it. Years later it was converted to the 64 by U.S. Gold, by which time the crystals had lost their sparkle. Now it just looks and plays worse still. Much of the unplayability comes from the controls. The coin-op used a trackball, which was fine. Obviously a trackball was out of the question for the conversion, but the joystick controls seem to have a mind of their own. Bently Bear (for he is the hero) totters around the isometric Pacmsan-style constructions as if your input is simply a suggestion, rather than a direction. If you liked the coin-op, give it a try.
Overall: 58%



Crystal Castles



Spitfire

Batman The Movie

Ocean

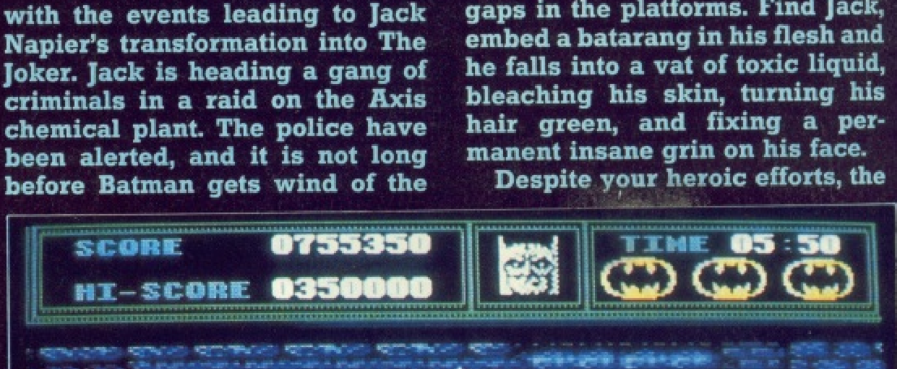
I liked the film. Okay I'm in a minority. So Jack Nicholson overshadowed Micheal Keaton, but then The Dark Knight always was a man of few words. What's more, the film was an excellent translation of the more serious Batman graphic novels. It seems hype is a powerful tool; almost the entire cinema-going population expected a flick that would change their lives, regardless of whether they previously had even the slightest interest in Batman. A very similar situation to the Jean Michel Jarre concert, Destination Docklands. So many had anticipated some kind of mind-warp freakout experience, and were disappointed as a result. It turned out that everyone I met who expressed their disappointment, was not even a Jarre fan in the first place! If you're taken in by hype, no-one is to blame but yourself.

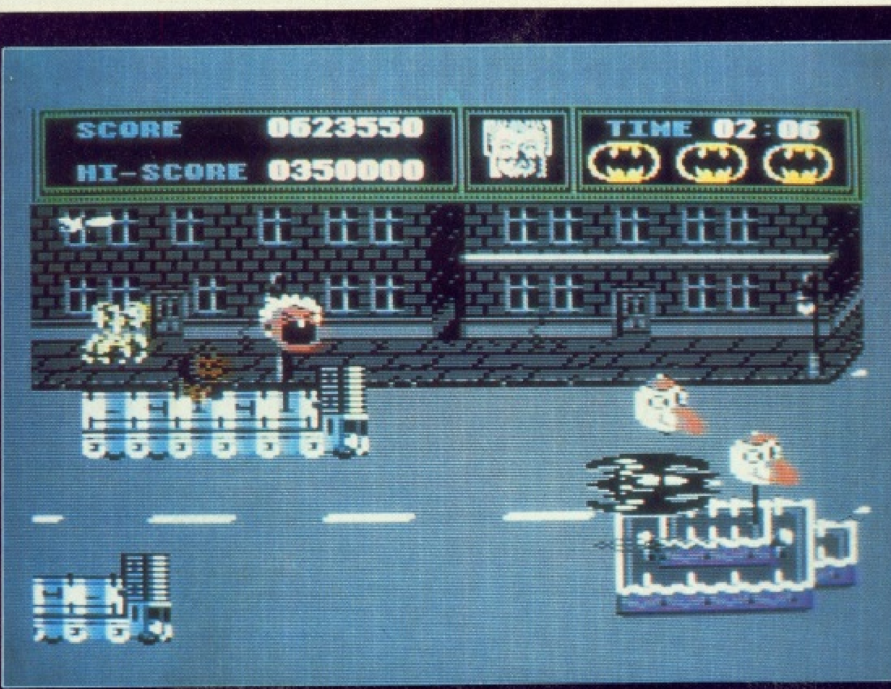
> *"They have taken a familiar path, splicing the action into five levels, each relevant to a scene from the film."*

Ocean haven't laid the hype on too thick with the game, no-doubt taking advantge of the existing, but now subsiding Batmania. With the design and programming of the game however, they have taken a familiar path, splicing the action into five levels, each relevant to a scene from the film.

The first of three loads deals with the events leading to Jack Napier's transformation into The Joker. Jack is heading a gang of criminals in a raid on the Axis chemical plant. The police have been alerted, and it is not long before Batman gets wind of the disturbance. Jack is your target, but his henchmen have orders to kill any threat on sight. The plant is a multi-directionally scrolling labyrinth of platforms and ladders, infested by the baddies, of course. You can withstand a few direct gunshots, but you will need to make use of your batarangs if you are to survive. You also have a handy grappling iron, complete with a powerful winch. This is an essential piece of equipment, as it allows you to reach overhead walkways, and swing across gaps in the platforms. Find Jack, embed a batarang in his flesh and he falls into a vat of toxic liquid, bleaching his skin, turning his hair green, and fixing a permanent insane grin on his face.

Despite your heroic efforts, the authorities refuse to tolerate a vigilante in Gotham City. Road blocks are set up, making the trip back to the batcave a bit tricky. The road scrolls from right to left as the rest of the traffic weaves about with no particular direction; pretty much like Paris in the height of summer. An arrow indicates when to take one of the side roads. Rounding tight bends at speeds the Batmobile is capable of, calls for something more than a handbrake turn. Pressing





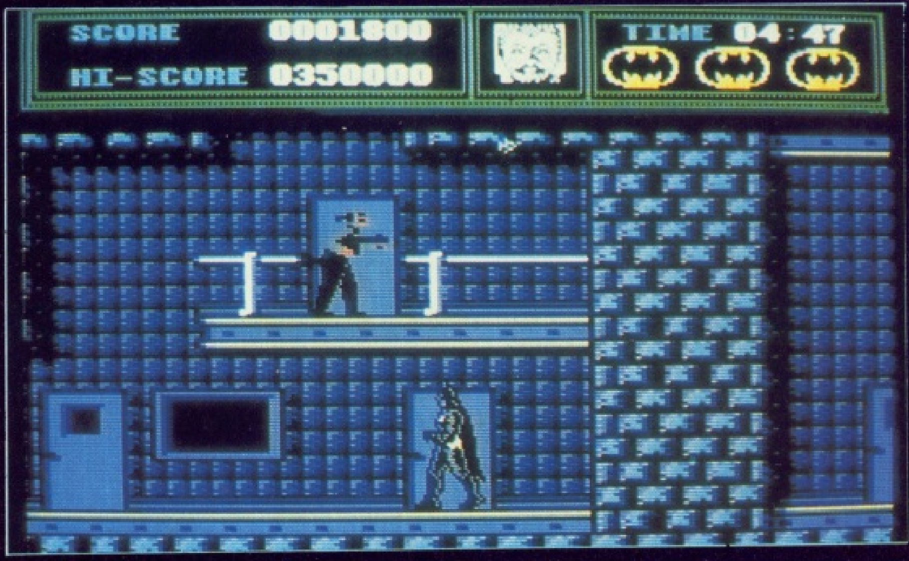
fire shoots out a line which wraps around the handily-placed street lights on the corners, guiding you safely round the bend.

Back at the Batcave, you try to find out which of the numerous toiletries on the market The Joker has spiked with his poison "Smilex". The sub-game is played like the board game Mastermind, and must be completed within a lax time limit.

Had I not seen pre-production screenshots a while ago, I would have been disappointed in Batman. Batman is tough, rugged, and he means business. The Batman sprite however, is wooden, ugly, and far from dynamic. The Caped Crusader as seen in the previous Batgame was far better, despite only using two sprites compared to the current's three. A decent central sprite can do a lot for a game's overall look, but by the same token, a dodgy one can really bring it down.

Meanwhile, The Joker is luring the populace of Gotham City into a fiendish trap. His well publicised carnival has the crowds flocking, drawn by promises of huge cash hand-outs. However, the public are unaware that the giant balloons are not filled with helium, but Smilex. At the controls of the Batwing, you have to cut through the moorings of the balloons, sending them harmlessly up into the sky. Let too many slip through the net, and it's curtains for the lot of you.

The final confrontation plays like the first level. The Joker has fled to the roof of the cathedral, where he awaits his rescue helicopter. Worse still, he plans to take Batman's girl with him! More Bionic Commando-inspired action follows, with the additional hazard of spiked floor tiles. Defeat The Joker and the pathetic excuse for an end sequence is a big disappointment. A blocky Joker sprite falls a couple of screens, lands on the ground, and a congratulatory message is displayed. Surely a quality still or animation, with music or even sampled laughter was not too much to ask, even if it did mean a further load?



These multi-stage film tie-ins favoured by Ocean do have the advantage of varied gameplay. On the other hand, each section is never quite as developed as you could expect from a more standard arcade game with a continuing game style. This is one area in which Robocop scores highly in my book. That game hung together more naturally through its constant, but progressive game style. Batman seems more a collection of small games than one big game. Not that it is necessarily any the worse for it, it is just not the approach I would have taken.

"Batman seems more a collection of small games than one big game."

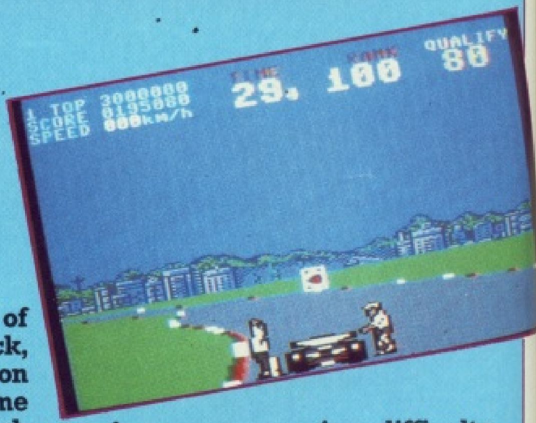
It is all very neatly programmed, in particular the swinging rope effect, but the game lacks excitement. Tension, which should have been created by moody graphics and pacey gameplay, is in short supply, relying mainly on the time limit to convey the urgency. Yes it's playable, but you'll find yourself playing on to see what follows, rather than for the fun of the task in hand. Batman is good, but it should have been a lot better.

T.H.

Graphics: 69%
Sound: 40%
Playability: 70%
Overall: 70%
Price: £9.99 (cass)
£14.99 (disk)

Continental Circus

Virgin



But for the 3D glasses, Continental Circus was just another race game. It was way behind the technical standards set by Sega's machines, and had no startlingly new gameplay features. On top of that, I never found the 3D worked that well anyway. Despite all this, 3D motor racing sims are one of my favourite genres, so I was interested to see how the 64 conversion had turned out.

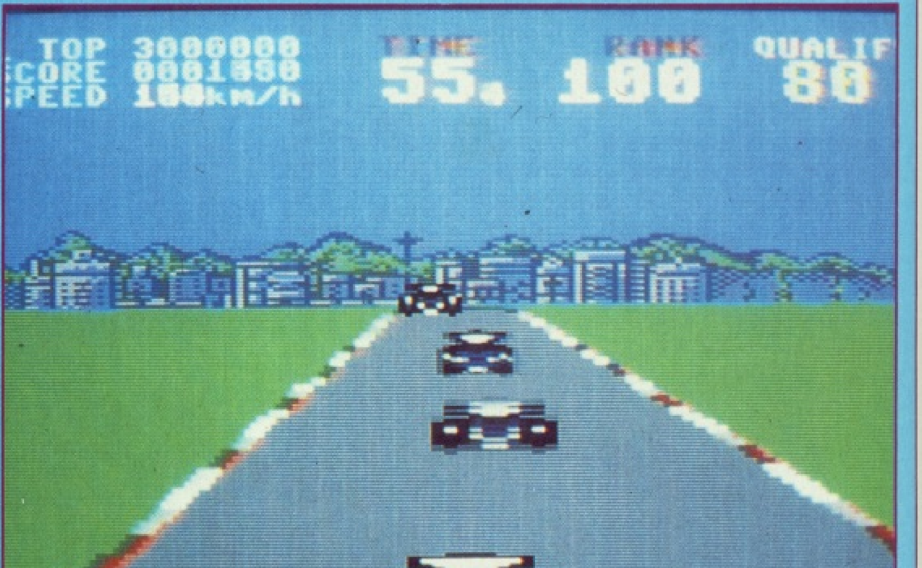
The object is very straight forward. Each of the international circuits is divided into short stretches, marked by checkpoints. You get a set amount of time to make it from one checkpoint to the next. Completing each stretch within the time limit doesn't guarantee you a place in the next race. Only a certain number qualify. In Brazil for example, it's only the first 80 who go through to the next round. With each race the field is depleted and the time limits are tightened.

> *"With each race the field is depleted and the time limits are tightened."*

One of the more unusual features of Continental Circus is the pitstop. A minor collision with another car or roadside object will start the engine smoking, and soon after it bursts into flames. If you happen to be passing a pit lane, pulling over and stopping the car freezes the timer. A couple of mechanics run out onto the track, extinguish the fire and set you on your way again. It adds a welcome touch of variety, but isn't a patch on the player-controlled pitstop of the re-released Pitstop II.

> *"The road is messy and unnecessarily chunky, but then it is on the coin-op too."*

The game is no star when it comes to graphics. The cars are extremely blocky (even *your* car is an expanded sprite), with virtually no detail. Roadside trees and billboards are in the same league. The road is messy and unnecessarily chunky, but then it is on the coin-op too. The music amounts to a few bearable jingles, and the effects comprise an above average engine "vroom", and a few other pings and bangs.



Overlook the weak graphics, and Continental Circus is fairly playable in the short term. Once you've seen the first few tracks, it all gets rather repetitive. Other than a new combination of bends and a more pressing difficulty level, there are no worthwhile variations from one track to another. Once you realise this, it kills any incentive you had of finishing the next race. No one has yet managed to top Pitstop II. Continental Circus is just the latest of many failed challengers.

T.H.

Graphics: 40%
Sound: 58%
Playability: 52%
Overall: 50%
Price: £9.95 (cass)
£14.95 (disk)

WIN! WIN! WIN! WIN!

one of

TWO RADIO CONTROLLED CARS

with Virgin and Continental Circus

Bacon and eggs are all very well, but what do they have to do with Continental Circus? That's right: absolutely nothing! That's why we chose to give away not a fried breakfast, but TWO radio controlled cars, along with twenty copies of Virgin's Continental Circus conversions. Actually, it's all thanks to Virgin's "Sexy Scottish Beastie" (sometimes known as Lesley 'Oh those legs!' Walker) that these wondrous prizes are up for grabs. When we called her to ask if she'd sponsor a "Win a greasy breakfast" competition, she pointed out quite rightly, that we had indeed downed one over the odds with the pub lunch. I shudder to think where we'd all be without a good bit of Scottish straight-thinking to keep us in line.

So you want to know how to get your mitts on these goodies? Easy, just answer the questions correctly, jot them down on a postcard, and send them to the address below, stating whether you would prefer streaky or back bacon.

1. Who is the world's most successful racing driver?

2. What was the gimmick of the Continental Circus coin-op?

3. Before Ferrari, for which team did Nigel Mansell drive?

4. Which of the world famous Mr. Men is partial to an egg breakfast (hint: eggs are full of protein)?

a) Mr. Tickle
b) Mr. Strong
c) Mr. Bump

All entries must be received by February 15th

Answers on a piece of toast (or failing that a postcard) to:
CONTINENTAL CIRCUS COMPETITION
CCI
40 BOWLING GREEN LANE
LONDON
EC1R 0NE

HORGAN'S HINTS

You lucky lot! What a cornucopia of prime and porky pokes, maps and tips I have for you this month! Fighting their way to the top of the mountain of regular pokes are a couple of essential Batmaps, plans of the first and final levels of Batman The Movie. If by next month you're still having a spot of bother in rounding up The Joker, I'll let you in on a few helpful pokes where it will do you the most good. For Amiga gamers, there's a plentiful helping of Kristal tips (and Alistair), along with a few cheat modes. Sorry for any disappointment caused to C16 and Plus 4 users last month, those missed out of the last issue have been included this time round. The first of a couple from our old friend Casey Gallacher get us off the mark.

64

Gemini Wing
Reset and enter the poke for infinite lives.
POKE 4602,173
SYS 30167
If you fancy just cheating slightly, press P on the title screen before entering any of the following passwords.

Level	Password
2	Mr Wimpy
3	Classics
4	Whizzkid
5	Gunshots
6	Doodguyz
7	D.Gibson

Kendo Warriors
Enter the pokes after reseting for infinite lives.
POKE 15115,165
SYS 2176

Renegade III (cassette)
Once you die, press space and just leave the tape running rather than rewinding it. The next level loads in, but the program thinks it's level one!

Real Ghostbusters
Follow the same procedure as the above Renegade III cheat. Thanks to Francis Hill for those.

Gaplus
More lives of the infinite variety are yours; just enter the poke after resetting the game.
POKE 32496,173
SYS 4099

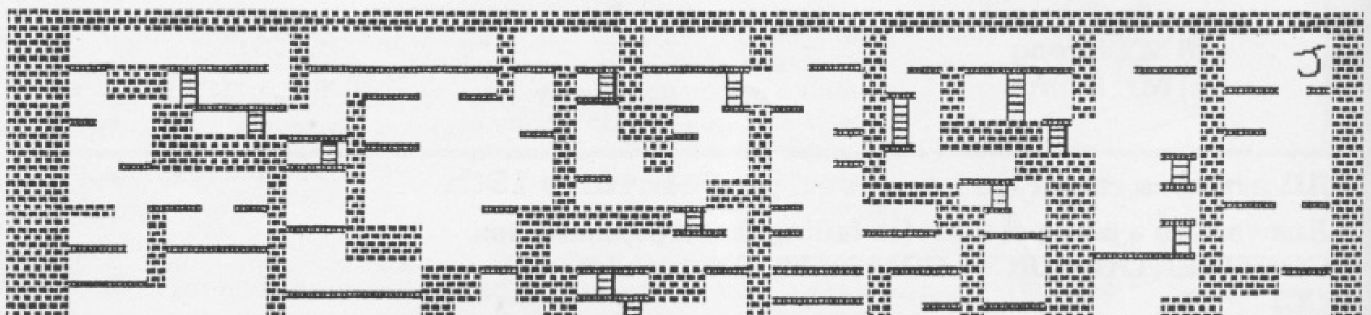
Butcher Hill
Type in these codes during the appropriate levels.
Level 1:
RATTLE AND HUM (cheat mode)
MAP (map editor)
Level 2:
WIDEAWAKEINAMERICA
(cheat mode)
MAP (map editor)
Level 3:
JOSHUATREE (cheat mode)
MAP (map editor)
That lot came from Eoin Waters.

Bomb Fusion
Andrew Thomas has let me in on this duet of infinite lives pokes, to entered after resetting the game.
POKE 3803,234
POKE 3804,234
SYS 3000

C16

This is the adventure game decoder from Paul Taylor I told you about last month. It works with most cassette-based adventures, and looks through the areas of memory where text concerning vocabulary, objects, room descriptions and the like are expected to be found. Much of the text it prints will be meaningless, but it should unearth a lot of helpful clues. Use the P key to pause and peruse.

After loading your game, reset the computer and enter:
POKE 52,18:POKE 56,18



Batmap first level

Now enter and run the following listing.

```
10 COLOR 4,1:COLOR 0,1:PRINT CHR$(147);CHR$(5);CHR$(14);CHR$(8)
20 VOL 8:FOR T=11264 TO 16384
30 IF X=PEEK(T):X$=CHR$(X):X=ASC(X$):IF X>0 AND X<32 THEN GOTO 90
40 IF X>129 AND X<149 THEN GOTO 90
50 IF X>155 AND X<161 THEN GOTO 90
55 IF X=0 THEN PRINT"-";:GOTO 80
60 COLOR 1,16,7:SOUND 2,200,2:PRINT X$;
70 IF X=46 OR X=33 OR X=42 OR X=63 THEN PRINT:SOUND 2,800,2
80 GET A$:IF A$="P" THEN COLOR 4,2,0:DO:GET A$:LOOP UNTIL A$="R"COLOR 4,1
90 NEXT:END
```

Here are some infinite lives hacks from Mr Taylor, all to be entered via the monitor after loading.

Gun Law

```
1213 AD BC 15
G 1018
```

Blagger

```
354A AD 4F 0F
G 241A
```

Arthur Noid

```
3029 AE 16 0D
G 2000
```

Spectipede

```
1A87 A6 03
G 107A
```

Invaders

```
2145 AD 27 0C
G 100E
```

Voidrunner

```
335E AD EE 34
G 1010
```

Jet Set Willy II

```
10C9 AD 6E 0F (level 1 only)
G 1000
10B5 AD 6E 0F (Levels 2, 3 & 4)
G 1000
```

Each time you load a new level, you'll have to re-enter the pokes.

Zodiac

```
1FD1 E9 00
2046 4C 93 20 EA EA
FF11 0F
G 1E43
```

AMIGA

The Kristal

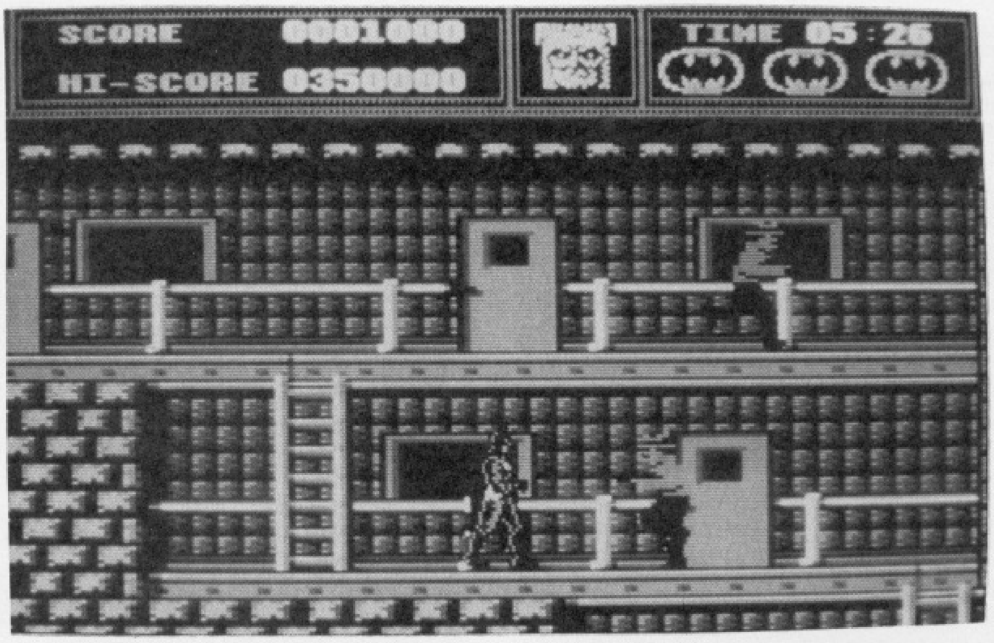
Here are some tips for anyone lost in Fission Chip's epic four-disk graphic extravaganza.

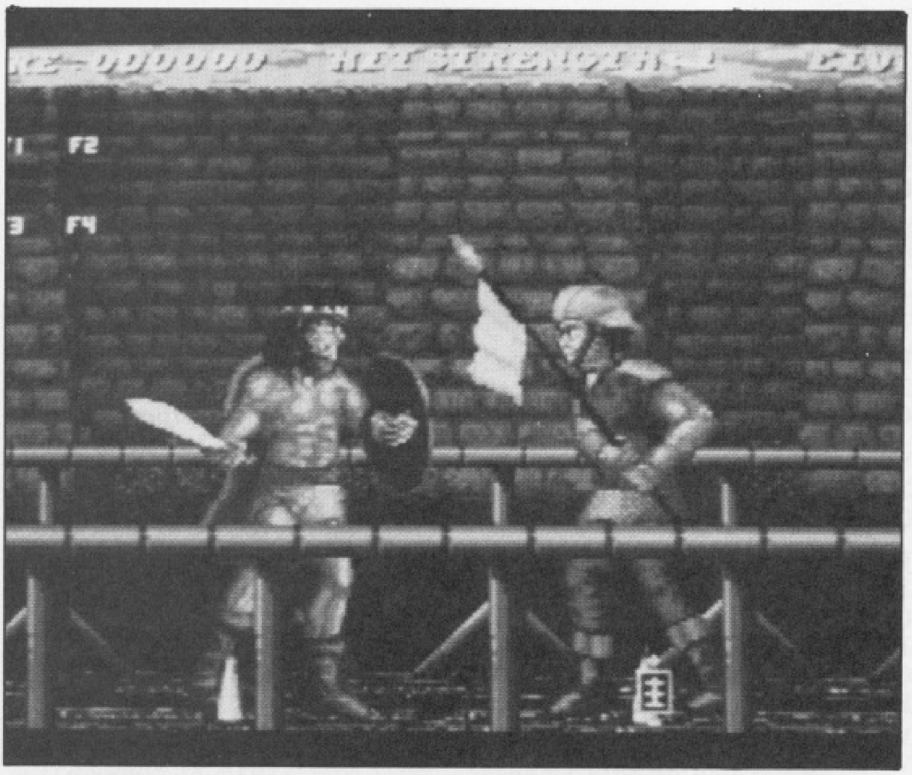
Fights

Proficient swordplay is essential of you're to get anywhere in the game. The neck chop is one of the more effective blows, but the program blocks repetition of single moves. To get around this, occasionally switch to a different move in order to enable the neck chop once again. Give generously to the poor and you'll be a step closer to obtaining the Sword of the Spheres.

The Palace

To enter the palace, you need to get the invitation from the elusive Gloop, found in Novala. Once you have it, keep out of fights or you could lose it for good. When you get into the palace, ask Nedrod three questions and he'll give you a talisman, which can help you find another useful item. Answer the Princess's question with "Its a





secret". She'll give you the Ring of Belz, which will only work in conjunction with the spell scroll.

In General
Objects are not always found in the same places from game to game, so a detailed search of both fore and backgrounds is often in order. To survive the final confrontation, a high psychic rating is needed, which can be increased by donating skringles to the poor. Disorderly conduct can have the opposite effect. The safest technique in the space battles, is to slow right down as soon as you see the aliens, shoot them all, then power at full steam until the next lot. Follow Redhead's ship if you see it. Heatpro tablets are necessary if you beam down to one of the hotter planets. Make notes of what you are told, and use any new names or subjects to weavel out every last bit of information from the characters.

Sword of Sodan
Get yourself at the top of the high score table and enter your name as Nancy, referring of course to none other than our own Ms Picard (RIP). Lives of the infinite variety are now yours, confirmed by the lives counter which now should display an exclamation mark.

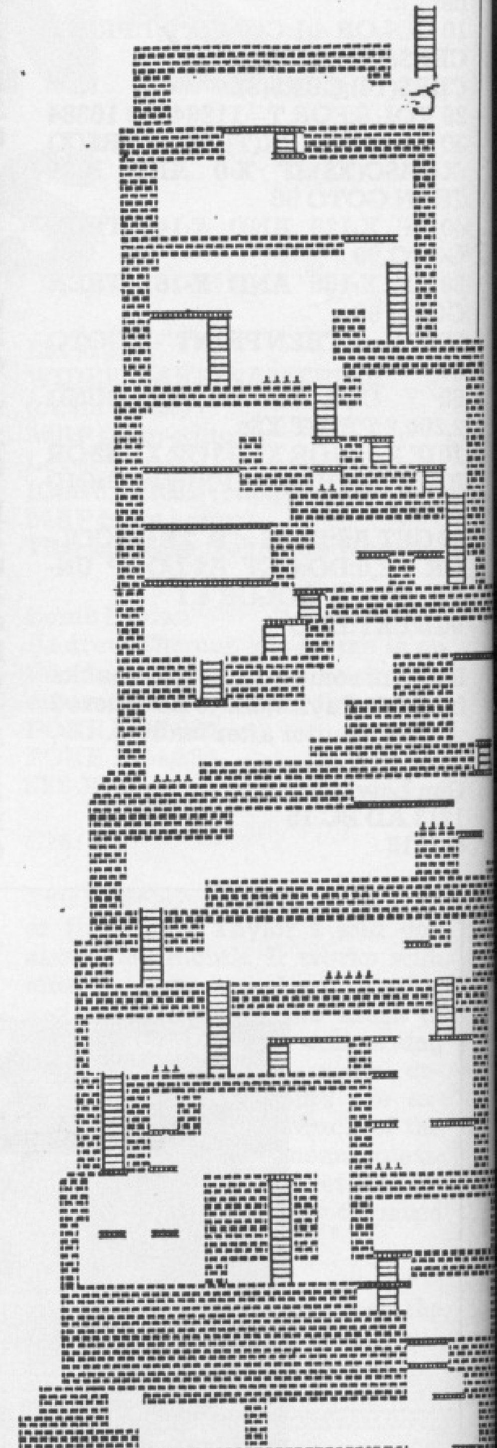
Zoom
To start on any level up to 30, press F10 when making the choice before playing.

Archipelagos
Solve the first two archipelagos and press RETURN to select another. Now type 8421 and press RETURN twice. This allows you to select any archipelago from 1 to 9999. The best ones to go for are those designed by the programmers, which occur every five archipelagos in the first 100.

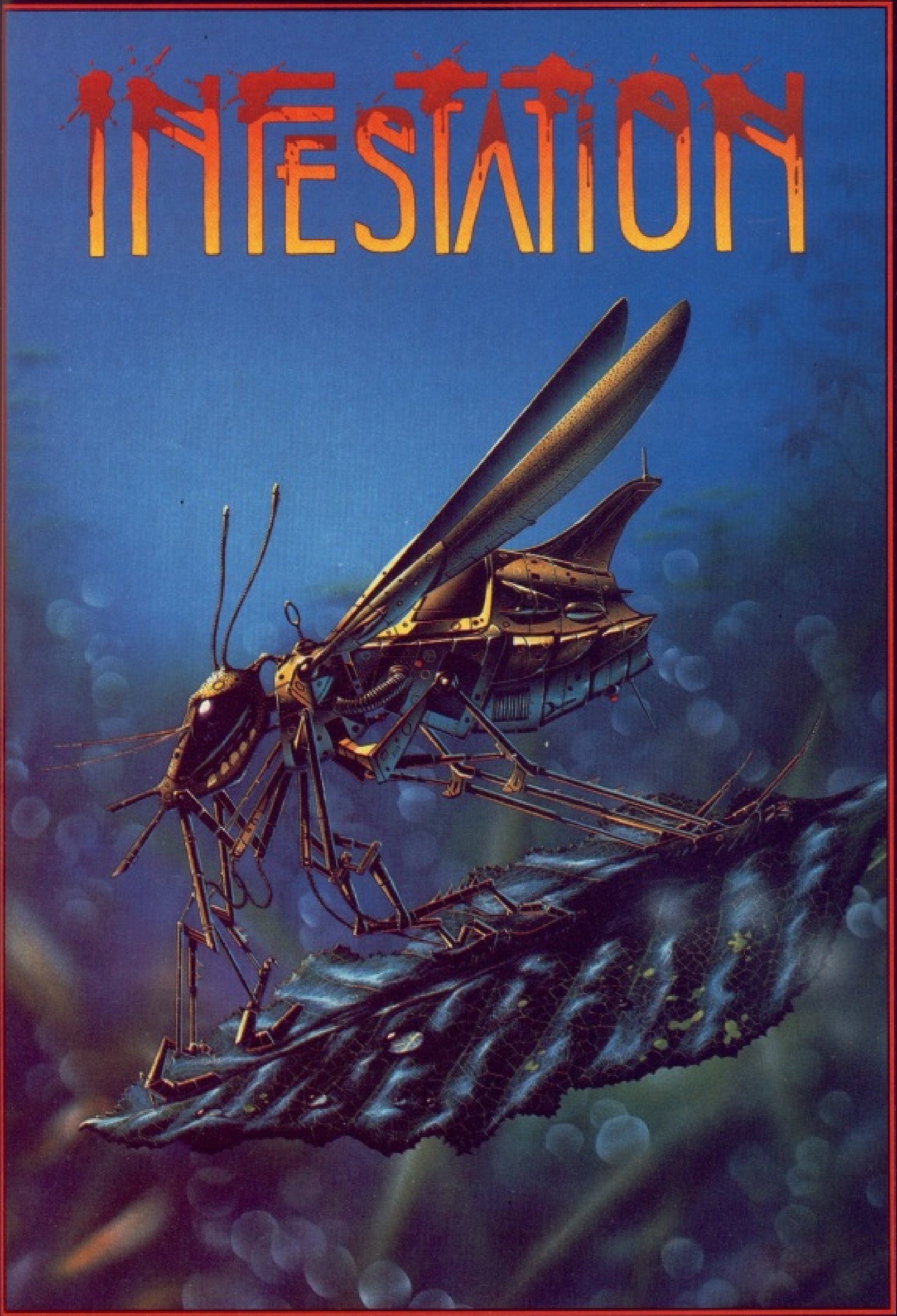
Vigilante
Type GREEN CRYSTAL into the high score table. Now press F1 to add to your stock of lives, and F8 to skip levels. Thanks go to T.A.W. for that.

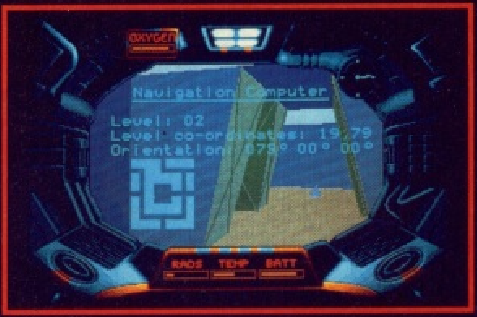
A goodie bag will be popping though the letter box of Paul Taylor in the near future for his contributions. If you've anything to offer (and I'm sure you have), get it to me at the address below. 64 pokes including a restart address are prefered if at all possible. Cheers.

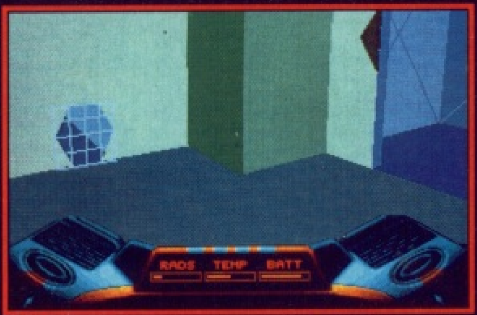
Tony Horgan
Haggard Horgan's Hints
CCI
40 Bowling Green Lane
LONDON
EC1R ONE

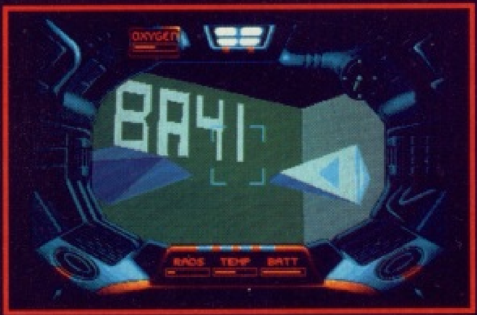


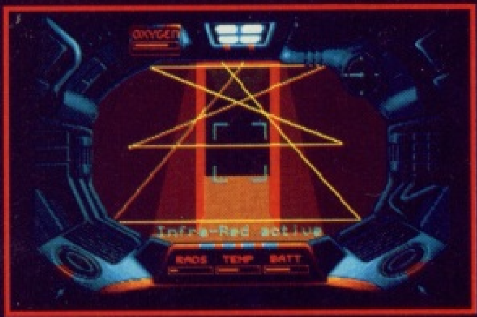
Batmap final level


INFESTATION


OXYGEN
Navigation Computer
Level: 02
Level co-ordinates: 19,79
Orientation: 278° 00° 00°
RADS
TEMP
BATT


RADS
TEMP
BATT


OXYGEN
BA41
RADS
TEMP
BATT


OXYGEN
Infra-Red active
RADS
TEMP
BATT

INFESTATION

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INFESTATION takes computer games to a new level of realism. It creates a complete environment stunningly rendered in super-fast solid 3D vector graphics. You are completely free to move within the game world, examining and manipulating objects just as you would in a real world. And, as in reality, you are not alone. Only, unlike those on Earth, the other occupants of Infestation's world are not very friendly at all . . .

Your task as Kal Solar, Agent of the Interplanetary Federation, is to travel to Alpha II, investigate and end the alien threat. Your mission will not be an easy one. As well as the mother alien and its eggs, you will have to deal with hostile droids and computer systems, radioactive areas, and things unknown.

INFESTATION is a truly atmospheric experience. Don't play this game when you're alone . . . it may well be your last!

Screen Shots from the Atari ST version AMIGA/ATARI ST £24.95

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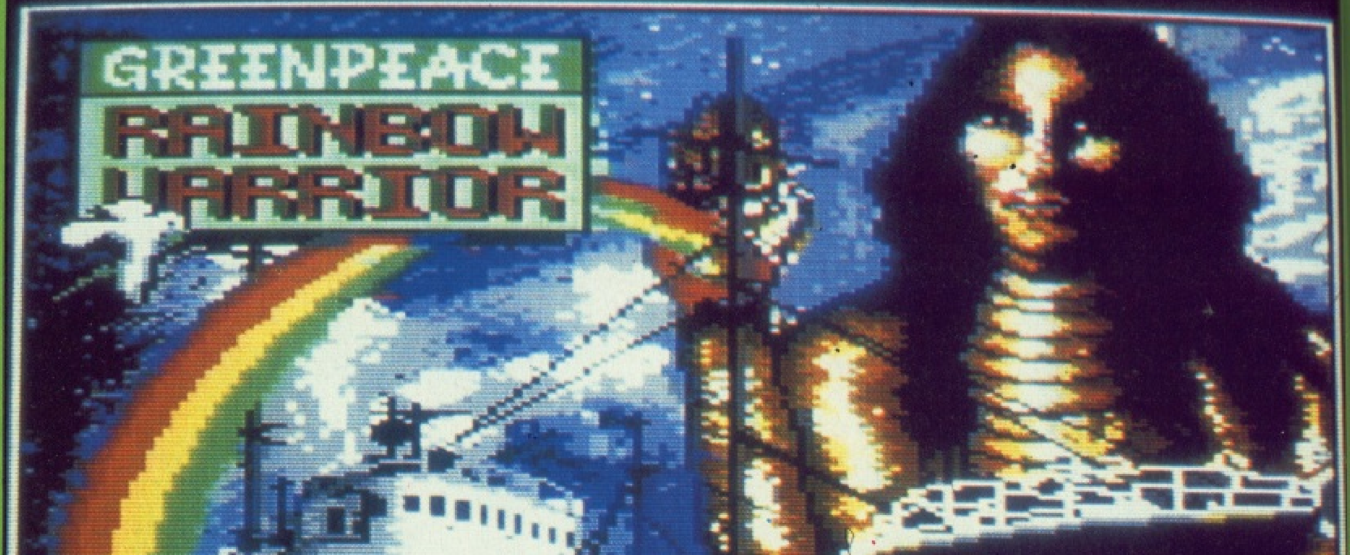


Micro Style

Looking to support a good cause with your cash? You may want to try Greenpeacing it...

"The world's first environment friendly software" is the billing for Rainbow Warrior. Other than the instruction manual, which may have been produced with recycled paper and environmentally sound printing processes, Rainbow Warrior is little more a friend of the earth than the latest coin-op conversion. Although the simple act of purchasing the game may do something for global greenery, the hope is that it will educate, and inspire those who buy it, to take to heart the issues it covers. And that is as good an idea behind a computer game as any I have heard. So Microprose deserve to be congratulated for it.

Seven of Greenpeace's campaigns have each been turned into a sub-game. The first six can be played in any order, but the final game is only accessible after the preceeding ones have been completed.

Campaign one concerns the blocking of pipelines, which are pumping out nuclear waste into the sea. You control a dolphin, who must guide the Greenpeace diver to the pipelines so that he can seal them. The radioactive waste has mutated the naturally harmless creatures of the sea. These are the baddies, which kill you on contact. Fishing nets, invisible to the dolphin's sonar, add to the hazards. The section is complete once the diver has blocked all the pipes. A nice idea, but the somewhat slow gameplay lessens the excitement.

The second campaign has you attempting to stop a ship from dumping its radioactive load into the sea. The ship, spread across three flip-screens, has three cranes which it uses to jettison the waste. Your objective is to board the ship and scale each crane, thus disabling them. Various missiles are hurled at you and your inflatable, but quick reactions are your only defence. The graphics are not realistic and simple gameplay does not demand much skill.

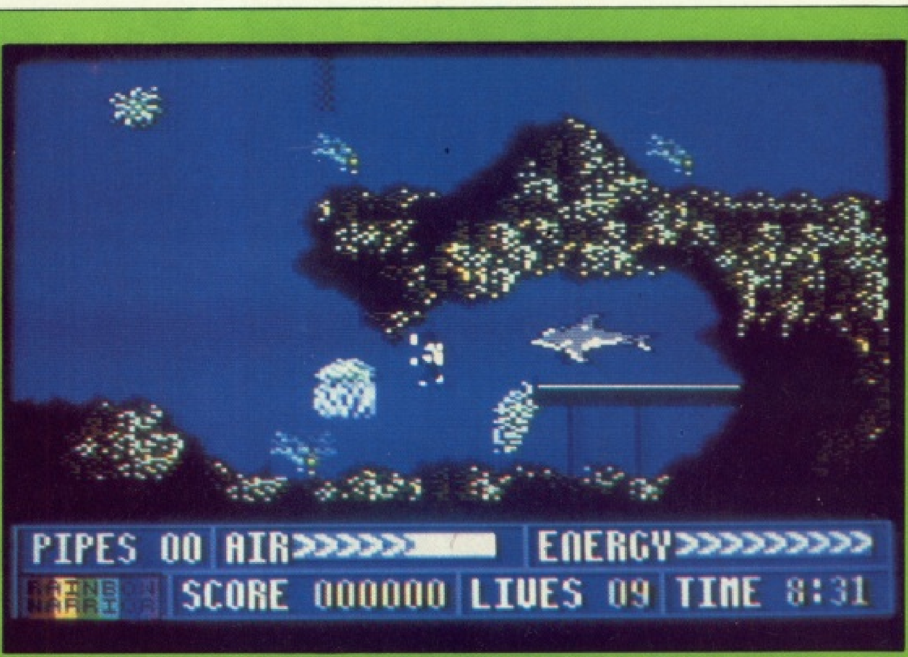
Save the Whale is another of Greenpeace's admirable campaigns, although the programmers' interpretation hardly does does it justice. You control a killer whale who moves along the bottom of the screen. You can shoot up to three balls of water into the air, which bounce off blank squares to reveal pieces of a Save the Whale poster. Good objects, such as the sperm whale and the Greenpeace campaigner, float across the screen and help fill in the picture if hit by a ball. Whaling ships and whale-based products such as margarine and perfume will erase the picture. The game is a breakout clone, with the whale replacing the bat and the picture building up, rather than breaking down. If you like Breakout-Arkanoid games, this will appeal.

Campaigning for an end to the barbaric seal culls is another branch of Greenpeace's activities. You take on the role of a Greenpeace activist, colouring the baby seals' coats with harmless dye, rendering them useless to their hunters. You hop around the ice floes, picking up bottles of dye and attempting to get to the seals before the hunters. Gameplay and graphics are not too impressive.

Greenpeace

Greenpeace is an international environmental pressure group. Through their non-violent protests and direct action, they have helped bring an end to legalised comercial whaling, and prevented baby seals being killed in Newfoundland and the Orkney Isles. They have helped persuade the Government to spend £200m cleaning Britain's beaches and £600m cleaning aerial discharges from coal-fired power stations, stopped the dumping of radioactivce wastes at sea, and stopped the French testing of nuclear weapons in the atmosphere. These are just a few of their many fascinating achievements. For more information, contact Greenpeace at the address below.

Address donations and correspondance to: Greenpeace, 30-31 Islington Green, London N1 8BR



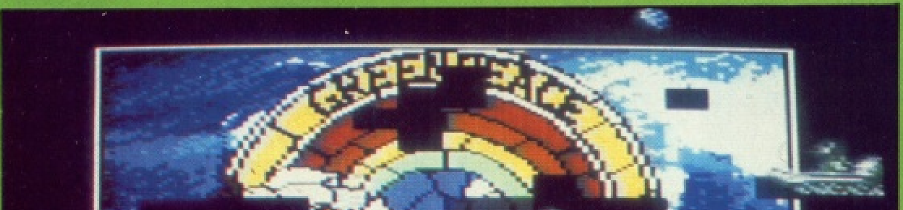
The rest of the campaigns are along similar lines, and have you attaching "Stop acid rain" banners to the chimneys of offending factories, and throwing snowballs at aerosols attacking the ozone layer. None is overwhelmingly exciting to play, and graphics and sound do not reach for very high standards.

An end must be brought about to all of these appalling situations. However, that does not give me the urge to play Rainbow Warrior. I know there are terrible things going on around the world, such as the horrific seal culls and whaling. I give to organisations such as Greenpeace and the International Fund for Animal Welfare, but in the same way that I would choose not to watch a TV program about such distressing subjects, I would choose not to play a game where the seals were clubbed to death if I lost. I don't doubt however, that there are many unaware of these atrocities, and if the game awakens them to these facts then it can only be a good thing.

> ***"I don't doubt, however, that there are many unaware of these atrocities, and if the game awakens them to these facts then it can only be a good thing."***

Microprose were unable to tell us the cut Greenpeace recieve from Rainbow Warrior's profits, but I can bet from a £9.99 sale, it's nowhere near the cash each of you could afford to donate. If you buy the game only for entertainment, you will probably not be too thrilled. My advice is to forget the game, but read up on what Greenpeace is all about (try The Greenpeace Story published by Dorling Kindersley), and make a donation. But nevertheless, 'Rainbow Warrior' would make a good present for a younger player and it certainly tells a story far more worthwhile than the usual shoot 'em up.

B.V.



Graphics: 56%
Sound: 20%
Playability: 48%
Overall: 46%
Price: £9.99 (cass)
£12.99 (disk)

Fiendish Freddy's Big Top O' Fun

Mindscape

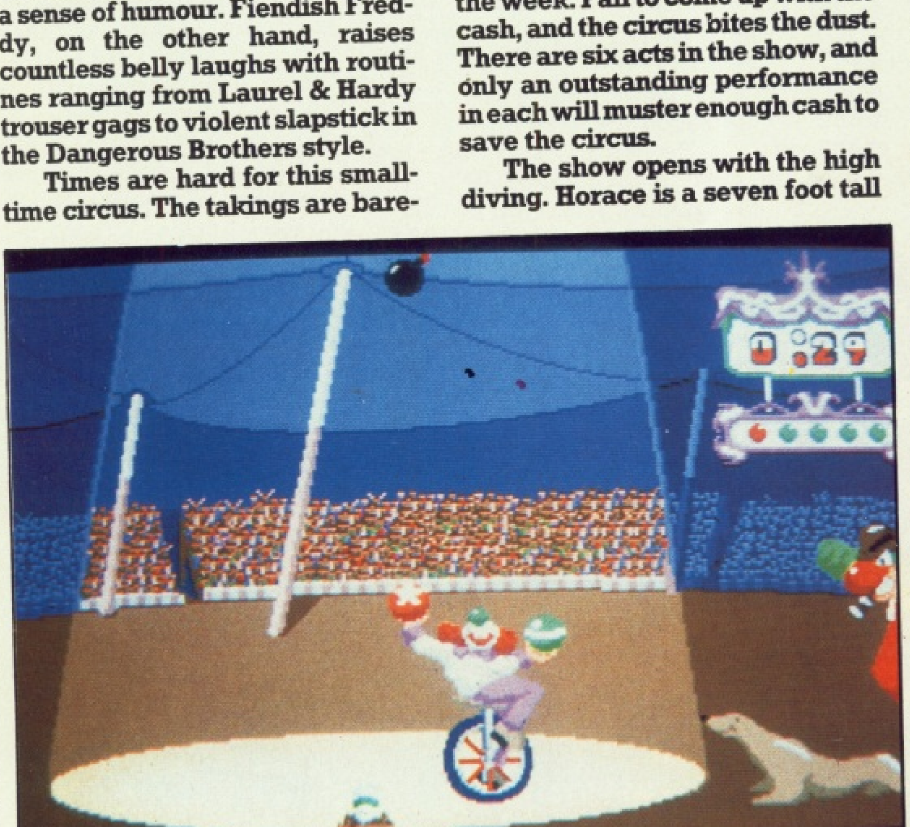
Circus games have been attempted in the past, but other than the old coin-op Circus Charlie, none had much of a sense of humour. Fiendish Freddy, on the other hand, raises countless belly laughs with routines ranging from Laurel & Hardy trouser gags to violent slapstick in the Dangerous Brothers style.

Times are hard for this small-time circus. The takings are barely making ends meet. If that was not bad enough, the bank has just demanded that you repay your $10,000 dollar loan by the end of the week. Fail to come up with the cash, and the circus bites the dust. There are six acts in the show, and only an outstanding performance in each will muster enough cash to save the circus.

The show opens with the high diving. Horace is a seven foot tall bald body builder. His idea of high diving is a little more hazardous than the usual five metre event. His act is split into four parts of increasing "Wow" factor. It begins with a leap from a springboard set at a dizzying height above a tub of water. Rapid stick waggling starts Horace spinning, and once he has gained enough speed, one of eight moves will flash up, indicating that it is time to stop waggling and strike the pose. The more poses you can squeeze in the better, but make sure you line yourself up with the tub in time. The following three dives are each from greater heights than the last. The tub disappears after the first dive, after which you aim for a bucket, a breeze block, and finally a tea cup!

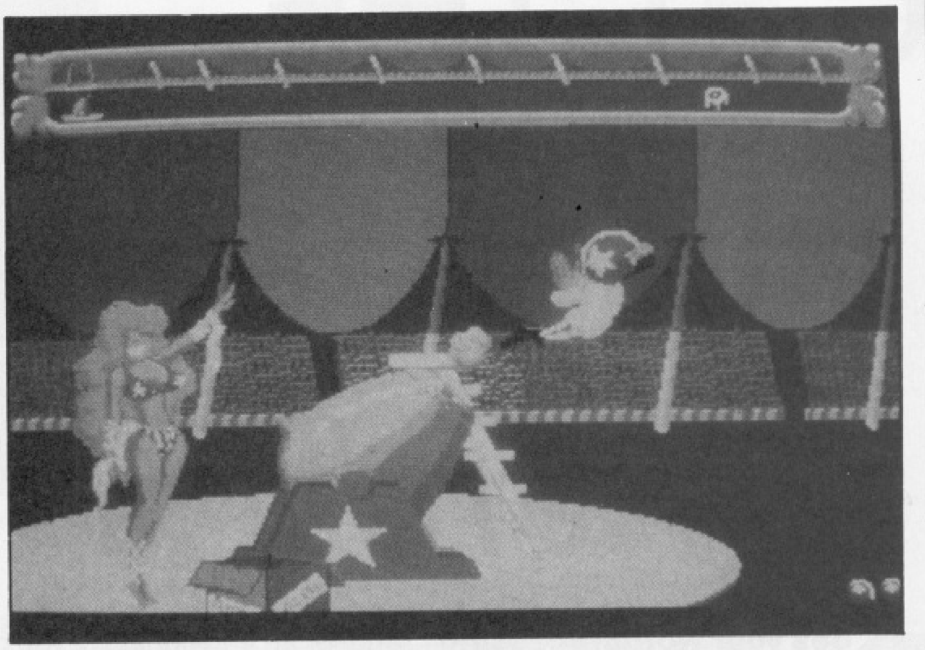
Juggling comes next. You control a unicycling clown. A seal tosses you a series of balls, clubs and fire sticks, and it is up to you to keep them all airborne during the timed act. Fiendish Freddy, a wicked clown hired by the bank to sabotage the show, lobs bombs in amongst the rest of the objects. Make it to level three and a baby somehow gets caught up in the excitement, who needs to be juggled safely back into his pram.

The least visually spectacular



event is the trapeze. The act is fairly simple, demanding that you get from one side of the big top to the other, without a safety net. Timing your launch from one swing to the next can be tricky, but Freddy is on hand with a giant pair of scissors for anyone who takes too long. Paper shields and flaming hoops add to the danger. The plain graphics of this stage are made up for when you mis-time a lunge, which is followed by an excellent death sequence.

> ***"It is easy to get so wrapped up in just keeping him on the wire that you forget to walk along it, but if you hang around you're likely to get blasted by Freddy's cannon."***



Knife throwing is the one event I could happily sit out. Your assistant is pinned to a spinning wheel, with a number of balloons placed around her person. You attempt to woo the crowds by bursting the balloons with razor-sharp knives, preferably missing your assistant's ample flesh. Hitting the targets is down to gauging the delay between throwing the knife and its impact.

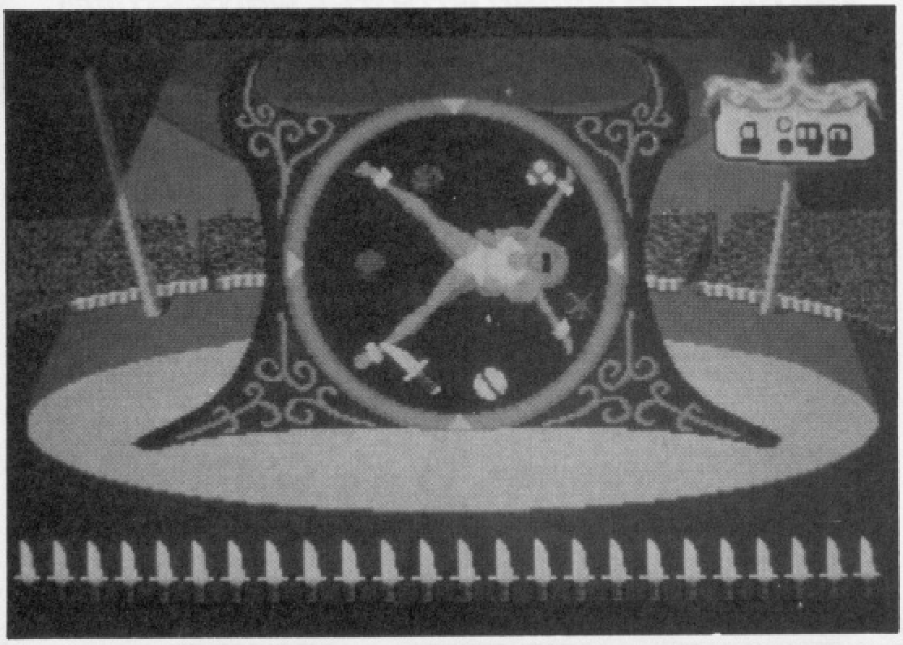
The tightrope is presented in much the same way as it was in Circus Attractions. You begin from the top right corner, working your way into the foreground in the bottom left of the screen. Tony Tiptoe is a big lad, and wobbles around like a jelly operating a pneumatic drill. It is easy to to get so wrapped up in just keeping him on the wire that you forget to walk along it, but if you hang around you're likely to get blasted by Freddy's cannon. Graphics are excellent in this event. Tony begins as a small sprite, but grows with each animation frame as he nears the end of the wire.

My favourite stage is the finale: The Human Cannonball. Fearless Fernando's assistant puts a random amount of explosives into the cannon, which decides how far you'll be fired. You have to estimate the distance, and position your angled trampoline where you think you'll land. The fuse is lit, and the cannon slowly tilts downwards. Pressing fire shoots you from the barrel, sending you flying across the ring. Land on target, and take your applause. Miss, and call for an ambulance.

The game comes on three disks; all those enormous cartoon graphics take up a lot of disk space. Subsequently there is a lot of loading between, and sometimes during events. Along with the graphics, there are loads of brilliant sampled sound effects. Not so hot are the circus tunes which insist on playing throughout the game. An option of just effects would have helped.

Fiendish Freddy was programmed by Chris Gray, author of Infiltrator I and II. The subtle touches of humour from his previous games has been stepped up enormously. Computer games with the ability to make people laugh are extremely rare. If is expensive, but if you want a giggle with your gameplay, Fiendish Freddy is a must. Highly recommended.

T.H.



Graphics: 92%
Sound: 90%
Playability: 85%
Overall: 84%
Price: £34.95

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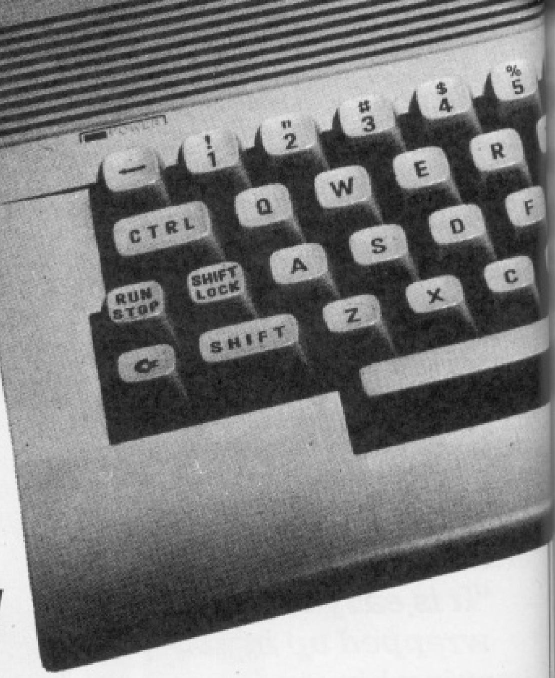

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Chart Chattering Events

So the old firms are battering it out ... Ocean's New Zealand Story (No, it's not about sheep!) forces its way up a place to take the top spot honours while U.S. Gold's Indiana Jones fights its way to runner-up position. And the U.K.'s number Three company get to that level with last month's champ Rick Dangerous. New entry Shinobi puts the Virgin brand on Four, and Anco's wonder soccer game Kick Off scores Five.

Of course the one to watch is Batman the Movie, heavily tipped to leap into the slot held by Ocean's other winner. At the time of going to press, Batman had only just been released, but was selling crazy and squeezed into ten.

On the Amiga front Imageworks' hot shoot-em-up, the Bitmap Bros' Xenon 2, blasts straight in at the Big One. And we have another new entry in the Populous follow up from Electronic Arts. Lovers of the original Populous are grabbing for it fast.

Budget level sees Pitstop II bounce up to the Top Spot (Did Nigel Mansell play it before he reversed out of the Grand Prix? And whatever happened to Martech's Nigel Mansell anyway?). But watch for Sensible Software's Ocean hit Wizball. Best value of the year at £2.99.

Z.M.S.

GAME TITLE	COMPANY	LAST MONTH	RATING	PRICE
1. New Zealand Story	Ocean	(2)	88%	£9.99
2. Indiana Jones	U.S. Gold	(5)	69%	£9.99
3. Rick Dangerous	Firebird	(1)	90%	£9.99
4. Shinobi	Virgin	(–)	76%	£9.99
5. Kick Off	Anco	(9)	31%	£9.99
6. Forgotten Worlds	U.S. Gold	(4)	90%	£9.99
7. 3D Pool	Firebird	(10)	80%	£9.99
8. Silkworm	Virgin	(3)	69%	£9.99
9. Rainbow Warrior	Microstyle	(–)	45%	£9.99
10. Batman – The Movie	Ocean	(–)	70%	£9.99
AMIGA				
1. Xenon II	Imageworks	(–)	90%	£19.95
2. RVF Honda	Microstyle	(5)	80%	£24.95
3. Forgotten Worlds	U.S. Gold	(2)	90%	£19.99
4. New Zealand Story	Ocean	(1)	80%	£24.95
5. Populous New Worlds	Electronic Arts	(–)	80%	£9.99
BUDGET				
1. Pitstop II	Kixx	(3)		
2. Yie Ar Kung Fu	Hit Squad	(1)		
3. Motor Cross Simulator	Codemasters	(–)		
4. Top Gun	Hit Squad	(–)		
5. Wizball	Hit Squad	(–)		

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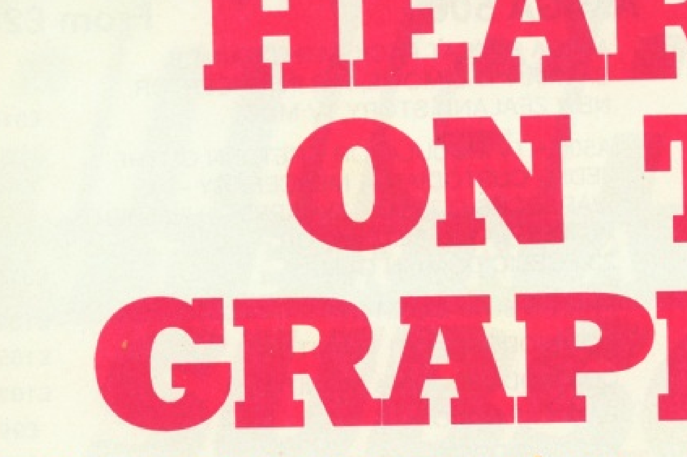
HEARD IT ON THE GRAPEVINE

This year's battle for the Chistmas number one looks once again to be a three horse race. It's anyone's guess as to who has the stronger license. Activision have thier hopes on **Power Drift,** Ocean's main contender is **Chase HQ,** and US Gold will be attempting to fill every stocking in the country with **Turbo Outrun**. Each of the big three are also backing up their frontline of coin-op conversions with film tie-ins, perhaps hoping to emulate Ocean's astounding success with **Operation Wolf** last Christmas, which was then followed by **Robocop** holding the top spot for months after. **Ghostbusters II** is on the way from Activision, Ocean have chosen **The Untouchables**, and US Gold are confident they have a winner with their **Moonwalker** tie-in.



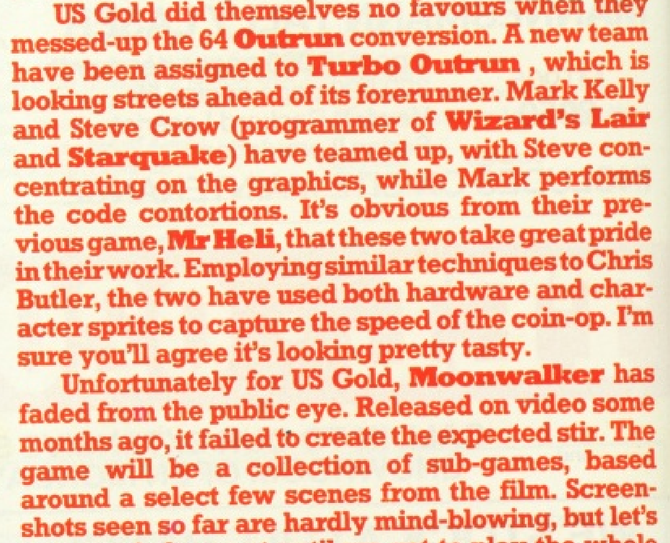
Moonwalker

It looks as though we may have seen the last of the disappointments of yesteryear. This year's three contenders are all looking very promising. **Power Drift** is being converted to the 64 by Chris Butler, author of **Commando, Ghosts 'n' Goblins, Space Harrier** and **Thunderblade**. Anyone who's seen **Thunderblade** will know how fast his 3D routines are, and he says since then he's eliminated the wobble and optimised the code. The Amiga version is being handled by ZZKJ, responsible for Activision's superb **Super Hang-On** conversion. Details are scarce concerning 64 **Chase HQ,** but stills from the Amiga version suggest another class conversion is on the way.

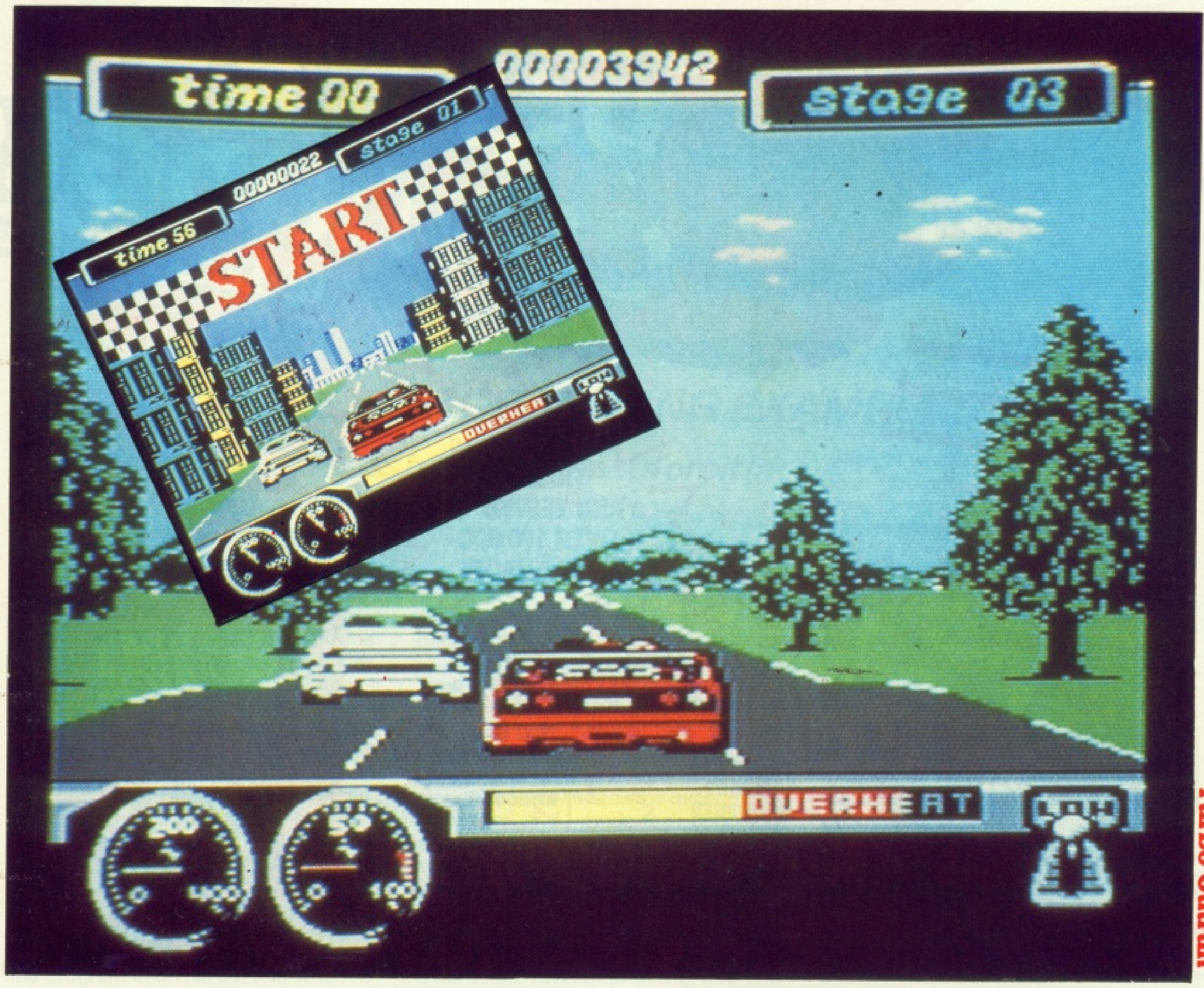
US Gold did themselves no favours when they messed-up the 64 **Outrun** conversion. A new team have been assigned to **Turbo Outrun** , which is looking streets ahead of its forerunner. Mark Kelly and Steve Crow (programmer of **Wizard's Lair** and **Starquake**) have teamed up, with Steve concentrating on the graphics, while Mark performs the code contortions. It's obvious from their previous game, **Mr Heli**, that these two take great pride in their work. Employing similar techniques to Chris Butler, the two have used both hardware and character sprites to capture the speed of the coin-op. I'm sure you'll agree it's looking pretty tasty.

Unfortunately for US Gold, **Moonwalker** has faded from the public eye. Released on video some months ago, it failed to create the expected stir. The game will be a collection of sub-games, based around a select few scenes from the film. Screenshots seen so far are hardly mind-blowing, but let's not pass judgement until we get to play the whole thing.

Getting back to what the marketing boys would call "original software", the programmers of the Amiga shoot 'em up **Hybris** are rounding off the



Commando



Turbo Outrun

sequel. **Battle Squadron**, from the U.S. company, Innerprise and distributed in Europe by ex-Microprose boss Stewart Bell's new Electronic Zoo label. **Battle Squadron** is only original in that it has no big name to push it up the charts. Like **Hybris**, it's another vertically scrolling shoot 'em up, but from the rolling demo we've seen, **Battle Squadron** looks excitingly as though it could equal, or even beat the great **Xenon II** in the gameplay stakes. **Battle Squadron** uses the height of a PAL screen with a slight horizontal scroll, giving as large a game area as possible. It's all been seen before, but the brilliant weapon upgrades, combined with some excellent sound and graphic effects make it one to watch. **Battle Squadron** could turn out to be the best shoot 'em up we have yet seen.

Elite, renowned for overrunning schedules, have again let us know that the Amiga versions of **Commando** and **Overlander** are almost ready for release. Going by the screenshots, I'd say you could expect to see them on the shelves before long. Bad news about **Ghosts 'n' Goblins** though; the Amiga version is now due for release early next year.

Another conversion of an ageing coin-op is on its way from Readysoft. **Space Ace**, the interactive cartoon from the creators of **Dragon's Lair**, is looking every bit as stunning as its predecessor. Dirk is thrust forward in time to a fantasy world, where he finds his girl whipped away by aliens! More of those amazing cartoon graphics are in store, but this time they tell me they have remembered to include some gameplay. The price? A mere £44.95.

A couple of late items that arrived just too late for review are **Xenophobe** and **Stunt Car Racer**, both for the 64. **Xenophobe** is a conversion of the coin-op, which set you as one of three good guys fighting off an alien invasion aboard your ship. The 64 game is a two-player outing, with an impressive intro sequence which gives way to an accurate-looking conversion. **Stunt Car Racer** comes from Geoff Crammond, programmer of **Revs**, and is an accurate emulation of his original 16-bit versions. It's a 3D race game set around a series of rollercoaster tracks, full of humps, ramps and banked corners. The graphics are a combination of fast moving transparent vectors and solids, giving a great impression of speed as you hack around the undulating tracks. Full reviews next month.

T.H.

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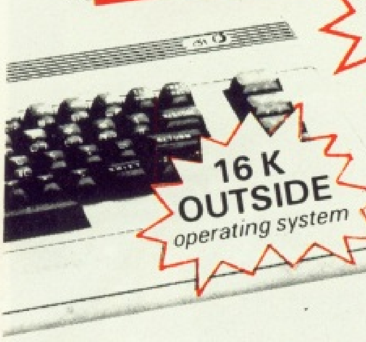

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PSET 3 - *Turns the printing 90 degrees!!*
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PSET B - *Bit-image mode.*
PSET C - *Setting Lower/Upper case and sending Control Codes.*
PSET T - *All characters are printed in an unmodified state.*
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BACK TO COMMODORE BASICS

SOME PROGRAMMING EXAMPLES

Peter Gerrard examines how the planets orbit (a word you must avoid for the 64!) and how to know when you have reached the end of the screen and other basic matters

I hope you all managed to get some sort of input routine working happily since the last article. As I said then, I will not bother listing one out, since I have used that same routine before within the pages of CCI, but I suppose if enough people write in and complain then I might dig it out of the vaults again.

Talking of people complaining, I had a letter passed on to me from a Mr. Broad of Sussex, who was writing about the Conversion program in the August issue. Not one of my own programs, I might add, but I still got the letter. Anyway, Mr. Broad tells me that he typed the program in on his 64, and when he runs it all he gets is the message ?SYNTAX ERROR IN 10. This is not surprising, since the program is written for a C128 and not a 64, but I must stress that neither article nor program mentioned this fact, and so we can't really blame Mr. Broad. Basically, if a program makes use of the special commands that are available on the 128 then the program is not going to work on the 64. Unless, that is, you care to modify it considerably. Since it is one of Peter MacDonald's programs and not one of mine, he can do the work!

But that does serve to show how easy it is to make mistakes when typing in listings from magazines. So, I will present three fairly short listings this month, all for the 64 (although they should also run on the 128 without any changes being made to them, if anyone would care to try), and as well as giving you some typing practice they are also useful examples of ways of solving problems. One was to cope with a series of questions in a book, the other two were written at the request of a friend. The first one, though, was for me and me alone, so we will consider that one to begin with.

I don't know if any of you get The Times Newspaper, or if you do whether you try your hand at the Tournament of the Mind questions that they seem to run every year. Well, I am not a Times person myself, but a book appeared along the same lines as the questions in the paper, and I made their acquaintance that way. It is all good solid MENSA stuff, but there was one type of question that I always had trouble with. It usually concerned three planets orbiting around a sun, you were given the number of years it took each planet to make a complete revolution of the sun, and assuming that the planets started off in a straight line with the sun you then had to work out when they would next be in line. All the planets, I might add, always travel in a clockwise direction.

Complicated stuff, reams of calculations on scraps of paper, so after half an hour or so of this I thought "blow this for a game of soldiers, let the computer work it all out" (or words to that effect). Away go pen and paper, out come keyboard and screen, but how to solve the problem?

Since the question always gives us the orbital period of each planet, then if we have three planets in the question we can set three variables up immediately. I chose the names O1, O2 and O3, O being an abbreviation for orbit, and the 64 would object if I tried to use a variable name like orbit anyway (the presence of the keyword OR). Also, the questions tells us that the three planets are in line to begin with, so that is another statement that we can make. It then becomes a matter of moving each planet around the sun, taking the shortest rotation period first, and working out how far the others would have travelled in whatever interval of time has been deemed appropriate. Then, we have to work out whether or not the planets are in line.

This is not quite so straightforward as it might seem, since one of the planets could be on the other side of the sun, 180 degrees away from the other two, but they would still be in a straight line if you could draw such a thing through all the planets and the sun. We have to consider that situation as well.

So there is the question, and the problems that we must solve and our method for solving them, let us now consider the listing and see how we go about turning all of this into a working computer program.

Line 10 tells you who wrote the program, and line 20 sets up a few screen parameters for background colours, colour of text etc. Line 30 declares the three variables mentioned earlier, the situation here being that the innermost planet has an orbital period of two years, the middle one takes seven years, and the outermost one takes nine years to travel all the way around the sun and get back to where it started from. They are all, at the start of the program, in a straight line. Interestingly enough, it does not matter whether any of them are on the opposite side of the sun to the others.

Line 40 sets the number of years to be 1 (held in the variable A), as we are going to consider the distance moved by the planets after whole year intervals. The questions usually state that the answer is a whole number of years, so we can forget about days, weeks, and even months. The three T variables, one for each planet, are a measure of the distance around the orbit that has so far been travelled. For example, after one year, planet two will have travelled 1/7 of the way around its orbit, after two years it will be 2/7, and so on.

In line 50 we turn this fraction of an orbit into a number of degrees, and once again we have one variable per planet. The maths should be fairly straightforward here, if a planet has

continued on page 70

continued from page 69

travelled 1/7 of its orbit then it has moved (1/7)*360 degrees, there being 360 degrees in a circle. We take the integer values as well, because again the questions always seem to involve whole numbers of degrees. Now we can start doing some checking.

You might, at this point, be wondering why we just don't multiply all the orbital periods together and get an answer that way. For one thing, there might be a shorter period, and for another this does not give us a way of checking on something being on the other side of the sun. Try it for this particular situation, if you don't believe me, and you will see why I resorted to computers!

Anyway, on with the program. In line 60 we see whether the first and second planet have travelled the same distance, or whether they are 180 degrees apart. Note that we use the command ABS. For example, if D1 was equal to 200 and D2 was equal to 120, the ABS value of D1-D2 would be 80. It would also be 80 if we took ABS(D2-D1). In other words we're not interested in any plus or minus signs, just the absolute value. If this line checks out then we can go on to line 80, otherwise line 70 sends us back for another travel around the orbits. Obviously, there is no point in checking any other planet if the first two do not form a straight line.

Line 80 checks for planets one and three. Why not two and three as well? If one and two are in a straight line, and one and three are in a straight line, then it follows that two and three are also in a straight line. If this check holds then we can go straight to line 130 and print out the result of our calculations, but if it does not then we have a few more checks to make before we start shunting our planets a bit further along their orbits.

This is to see whether any of the planets has gone round more than a complete orbit. If it has then we subtract 360 degrees from its orbit and reduce the T variable back to zero again. Failing to do this would mean that the checks in lines 60 and 80 would no longer hold true even if the planets were in a straight line. You and I might see that a planet that's travelled 720 degrees is in a line with one that's travelled 360, but the computer will not. We reduce the T variable to zero because we know that the planet has gone round and has completed a whole orbit.

In line 120 we print up the information for each planet in terms of how far it's travelled, before going back to line 40 and trying again. You might like to improve this not partiularly enthralling method of screen presentation if you want. Line 130, as we have already seen, is a summary.

I said earlier that you might think that you could just multiply all the orbital periods together and get your answer that way, but in this particular instance it doesn't work. Two times seven times nine gives us 126, but the number of years it actually takes for the whole lot to be in a line again is 63, with the innermost planet on the opposite side of the sun to the other two.

One of the other questions in the book that started all this off concerned three planets with orbital periods of three, four and five years. Multiplying those together would give us an answer of 60 years, but again this is not the case. A more startling example concerns two planets, one with an orbital period of 60 years and the other with a period of 24 years. 60 times 24 is 1,440, but the actual length of time it takes them to get back in line is a mere ... but why don't you run the program for two planets and find out for yourself?

On to our next two examples, two programs which are quite closely related to each other. I said that these were written to help a friend out, and indeed they were. Aforementioned friend was trying to design an adventure game that was different in its way of displaying text on the screen, and was experimenting with boxes of varying widths. Thus the text would sometimes be printed out in a little window that was 20 characters wide (e.g. a list of items being carried), or sometimes 40 characters. This might be for printing out a room description, for instance.

The rather obvious complaint here was that having all the room descriptions stored as a huge random file meant reading them in, which was no problem, working out where to put them on the screen, again no problem, and deciding when to split words up or whether to justify the text as well for a neater presentation. Problem. Enter Peter to the fray, and sometime later we had what we were looking for.

As before, let us consider the problems involved. Really, if we ignore justification of text for now, there is only one problem. How to tell when we have reached the edge of the screen, and we must find that out before we have printed our last word, not after. You might think, for instance, that if we had a simple counter keeping check on the current position of the text, and if that counter was at 30 after the last word and the screen width was 40, then we could jump onto the next screen line. That works until the program encounters a word that is longer than 10 letters, and then it finds itself printing some of the word on one line, some on the next, before printing a carriage return and dropping down yet another line. Very untidy. So, some other method of keeping track of where we are must be invoked, one that doesn't rely on all words being less than 10 letters long.

We will still be using a counter to keep a track of where we are, but we will not be printing text out either a word at a time or a character at a time. Rather, the way to go about solving this particular programming problem is to keep building up a string until its length reaches the length of our section of screen, and when we get there ensure that we print the string and then reduce it back to a null one ready for the next line. A trot through the program listing should serve to make this a lot clearer.

In the listing I have stored our example room description as a set of data statements in lines 100 to 150 so that tape users can make sense of what's going on as well as their loftier cousins with disk drives. The principles remain the same, though, and if disk users want to try their hand at amending the program they should remember to file everything as one long file. If you do this character by character the programming becomes easier.

Note in the data statements that if a space is required after a word, then that space is included. This is especially important at the end of a line of data. This rule only changes when we reach the very last statement, when we conclude things with a hash symbol, or a # as it appears in the listing. This is so that we can instruct the program when to stop reading in data, either from a set of statements as here or from a file on disk, if you were to amend it.

Line 45 sets our initial screen width to be 40 characters, although we'll change this later on just to show that the routine works. It also sets a counter C to be equal to zero, which will later be used to store the length of one of the strings in the program, and helps to ensure that the length of this particular string doesn't exceed the designated screen width.

In line 47 we read in the first data statement and store it in A$ before line 50 increments a variable XY by one. If it is greater than the length of A$ then we've printed every character from A$ and we need to reset XY and go back to line 47 to read another string. However, assuming that it isn't then we carry on. Line 51 extracts a character from A$ and stores it in C$, and in lines 54 and 55 we check to see whether we have reached the end of the description. If we have then we just go to line 80, of which more later.

If we have not reached the end, then line 56 first of all looks to see whether the counter C is less than the screen width. Assuming it is, then we start off on Z$ by adding C$ to it. If a space has been reached then we can print Z$ and return it to zero (if we're less than the screen width after incrementing Z$ then the word cannot possibly go off the screen and wrap around onto the next line, so we can print it), with line 57 sending us back for another character if we have not reached the edge of the screen yet.

If we have then we get to line 58 which throws us onto a new line, prints the whole of Z$ out, reduces it to zero after checking on its length and goes back to line 50 for another character. We carry on in this way until the end of the room description is reached, in which case line 80 just prints out whatever is left over. Line 85 reduces the screen width to show the effect of the program and, providing that width is greater than 15, sends us back round again for another run through of the program using the same data.

Now all that sounds a bit complicated, but if you follow the program carefully you will see that really it is not, and it does overcome our problem. Perhaps by looking at it running you might get some ideas of your own concerning text presentation. However, this is only half the battle. What if we want to justify the text as well, so that the right hand section of the description matches everything up in a straight line (like this column, I hope?). Some people claim that it looks neater, I claim that in certain circumstances it can lead to disasters, but let's take a look and see.

The heart of the program looks more or less the same, but this time we don't print out a word at a time, which means an alteration to line 56. Line 58 changes to a REMark, and line 59 is a new one which has a very important call to a subroutine at the start. That's the GOSUB 200, which we'll get to in a moment. Lines 80 and 85 have changed slightly as well, as indeed has the data. This is not just to show that the same thing works with different data, but to point out a potential problem with this sort of routine and indeed justifying text in general. What if two adjoining words together are greater in length than the width of our screen window, which means that they MUST be printed on separate lines. Then you have one word to a line, and one word cannot possibly be justified unless you start adding spaces to the word or playing about with proprotional spacing of characters, as is sometimes done with words in these columns. Since I refuse to start working on proportional spacing (that is, making the individual letters bigger or smaller) I leave it up to you to decide whether you want things right justified or not.

But back to the all-important subroutine, which occupies lines 200 to 225. The way in which various word processors attempt to justify things seems to vary from one program to another, but one popular method works like this. Say your screen width is 40 characters, and the string (in our case) is 35 characters long. Starting from the right hand edge of the string you insert an extra space between the last two words, another extra space between the second last and third last, and so on until your five spaces have been found.

If you go through every word and still don't have a line that's long enough, then start at the other end and add some more spaces. This process can then be repeated indefinitely until you eventually end up with a line of the right length. However, the results sometimes look a little strange, as you will see if you run the program and wait for the 20 column screen width. You will have to break into the program then anyway: the one word problem described earlier rears its little head. So if you want justification, stick to windows of greater size or words of smaller length, or just print the stuff up on the screen any old how and care not a jot for the aesthetics of right justification.

Having explained how the process works, lines 200 to 225 should now be self-explanatory, so I will let you ponder over them for yourself. Anyway, my right justification word processor tells me that I'm coming to the end of my allocated space, so I will finish with this. Whether you use tape or disk, try writing a program like the non-justification one that works with more than one room description by reading a file from tape/disk. You should find it an interesting exercise. Bye for now!

P.G.

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The British Music Fair

Andrew Bishop, AUI's resident music fan and high-tech buff, explores the excitements on offer at the technology crammed B.M.F.

First, I got trapped by Philip Taysom of "Microillusions" showing off Music X, the new wonder program for all Amiga sequencing maniacs. This program offers one of the most comprehensive sequencing packages I have yet seen. However, one minor fault is the quantisation pulse resolution of only 192 per quarter note as opposed to 384 per quarter note for KCS. This aside, with all of the facilities and upgrade possibilities of Music X, I would still recommend it highly.

One of the biggest names in the music making industry is, of course, Roland. They introduced a dedicated range of computer based music products that should take the instrument-buying public by storm. Their range begins with the CM32L, an expanded Mt32 (better quality and more sounds) and the CM32P(on upgraded U110). Their big daddy comes in the shape of the CM64 which is a CM32L and CM32P combined, giving 63 notes polyphony and 15 parts multi- timbrality.

Also from Roland comes the CF10 digital fader, utilising a touch sensitive fader and control board for mixing (via computer) midi sound modules. This unit covers midi-channels 1-10 and also controls panning; excellent, but why did they not go from 1-16? The CN20 music entry pad does exactly that, entering music data direct into a computer based sequencer. Both the CN20 and CF10 should retail for around £129 and both pieces are excellent. Finally, we have the CA30 Intelligent Arranger, an ideal unit for learning music arrangements. You put a basic melody on a sequencer and transfer it to the CA30 which sends the information back out via midi, complete with a 'Perfect Accompaniment'.

DP1800
A·DAM
AKAI

My award for extreme negative technical breakthrough has to go to the Kawai's piano stand. They have managed to manufacture a grand piano that does not even compare to a very trebly 12 bit module. Sad, isn't it, when the original sounds worse than the technological imitator.However, what did impress me was a baby grand, manufactured by Reid-sohn, that has an addictive action and an unusually sweet sound. At £3500, it would be an impressive addition to any studio. Rhodes (now a part of Roland) are back on the scene with a range of electric pianos, which internally are sampled pianos with an impressive range of sounds and midi functions, but externally resemble a stage piano from Quadraphenia.

Back on the high tech scene I saw the new Tascam 24 track tape machine (MSR24) for around £8000, which may seem expensive but is in fact cheap in comparison with other 24 track machines. If the MSR24 is as good as the MSR16 then Tuscan will have a real winner. On the smaller studio side comes a range of superb midi/portastudios, firstly the 644 midi-studio, a 16 track mixer into a 4 track tape machine (16 tracks input, 4 tracks output,standard cassette), and secondly the 688 midi-studio, a 20 into 8 track tape machine. Both machines are impressive, though the 688 caught my eye the most.

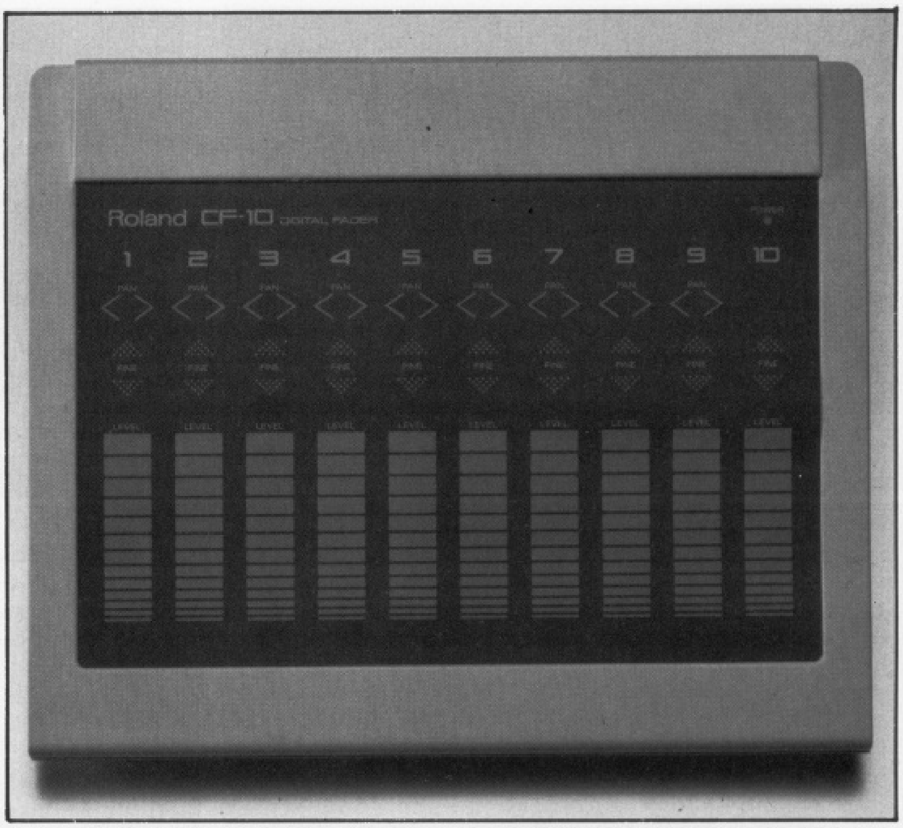
On the Akai stand I found an impressive item called the Adam (a 12 track digital tape machine at an equally impressive price of £15000) which sounded great. My only criticism was that Akai did not show the MG12 14 (5000).Being good in sound and quality it seemed sad that they did not want to entice people to buy this as opposed to the standard 16 track reel to reel.

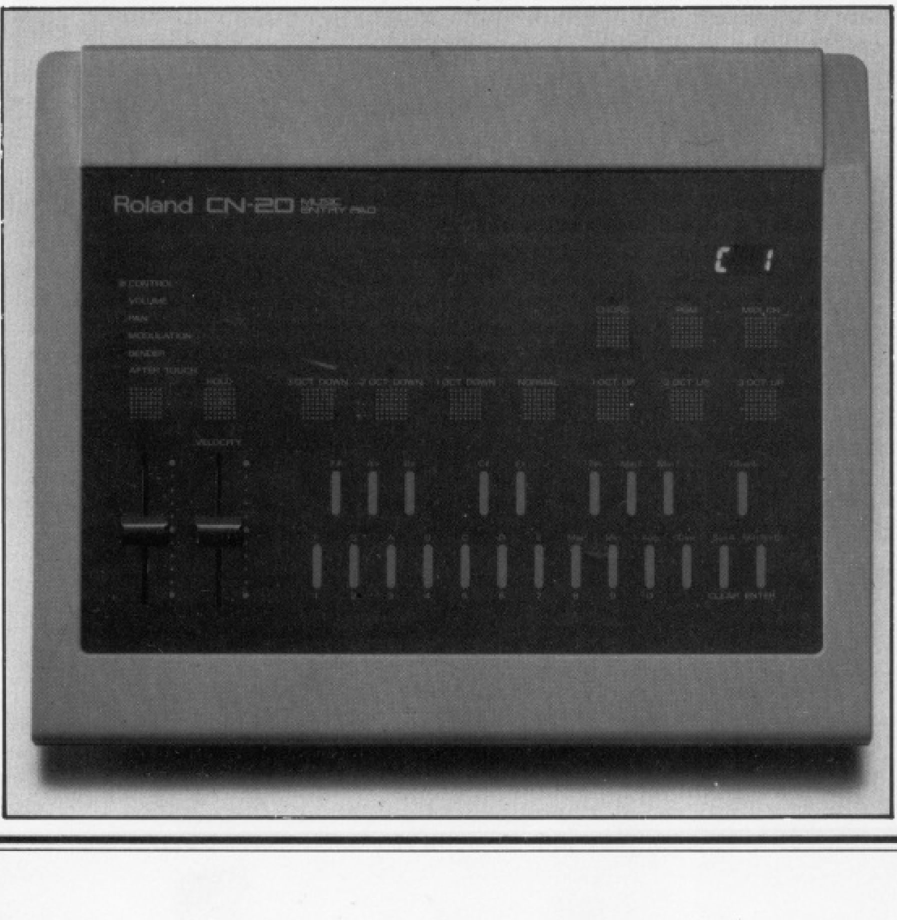
On the sound processing side one major item impressed me - the Digitech IPS33 Smart Shift - wow! - one note in, 3 notes out, two of which are programmable harmonies of the original note. It can be used for vocals, guitar, synth, etc, always giving impressive results. I would think that even the high end harmonisers (£2000+) would find it hard to compete with this item.

Korg, who gave us the M1 etc., brought out the M3R, a sequencer less M1R (and thus with only one oscillator). However, at £899 and £200+ for the programmer it seems you might as well go for the M1R. Yamaha were surprisingly low on new products, though one worth a mention was the MT3X, a 6 into 4 track portastudio.

It is nice to see good music packages coming out for the Amiga; Music X will give Dr. T's KCS 1.6a and level II a bit of competition. Items such as the EMU Proteus and Korg M series along with Rolands CM64 etc., show a marked improvement in both sound value and price for professional and amateur. This, combined with the midi controlability of effects units such as the IPS33 Smart Shift and Alesis Quadverb is all good news for people making music on the Amiga.

A.B.





GLOSSARY

For those (that means virtually everybody! Ed.) whose technical expertise is not quite so comprehensive as A. Bishop's - a few useful terms.

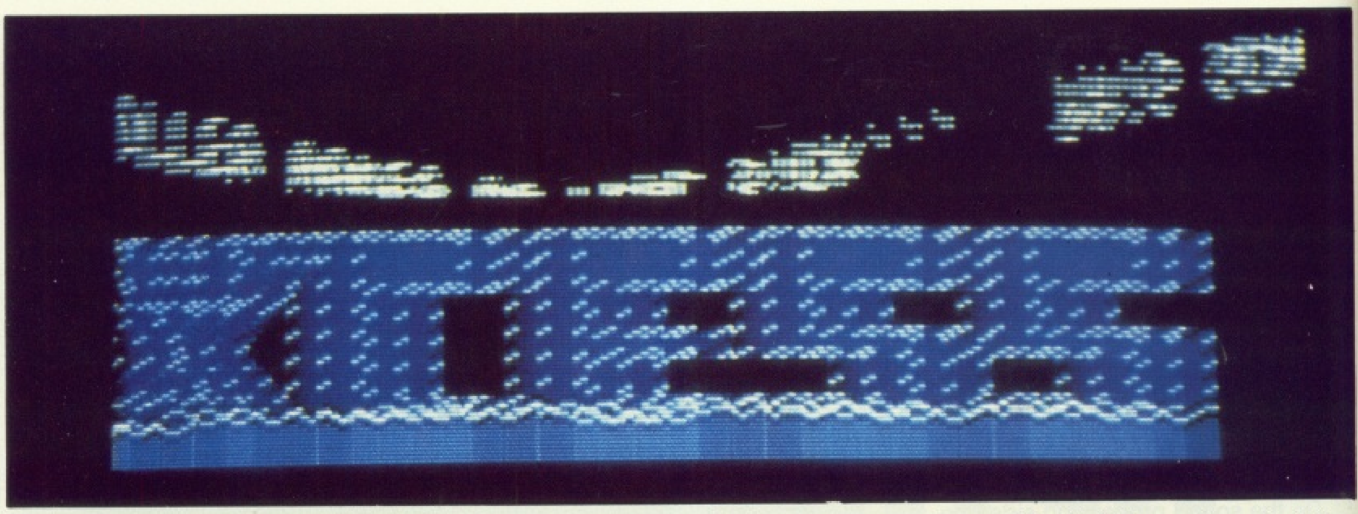
QUANTISATION: *When you use a sequencer and a keyboard, there are subtle timing differences, meaning that the playing of the note may not necessarily be dead on beat. Quantisation sequences divide the bar into smaller sections allowing it to tighten up the discrepancy in timing, thus allowing the notes to be pulled into the beat required.*

PANNING: *To "pan" a sound means to alter its right / left output.*
MIDI: Musical Instrument Digital Interface

MIDI-CHANNELS: *These run from 1 to 16 in total. All messages run into the midi-channel via the same line, but the midi-channel distinguishes between different messages by giving them different numbers between 1 and 16. Thus, the number acts as an identification tag.*

POLYPHONY: *The playing of more than one note at the same time.*

MULTIMBRALITY: *Playing more than one note at one time, each with a different voice.*



Demos

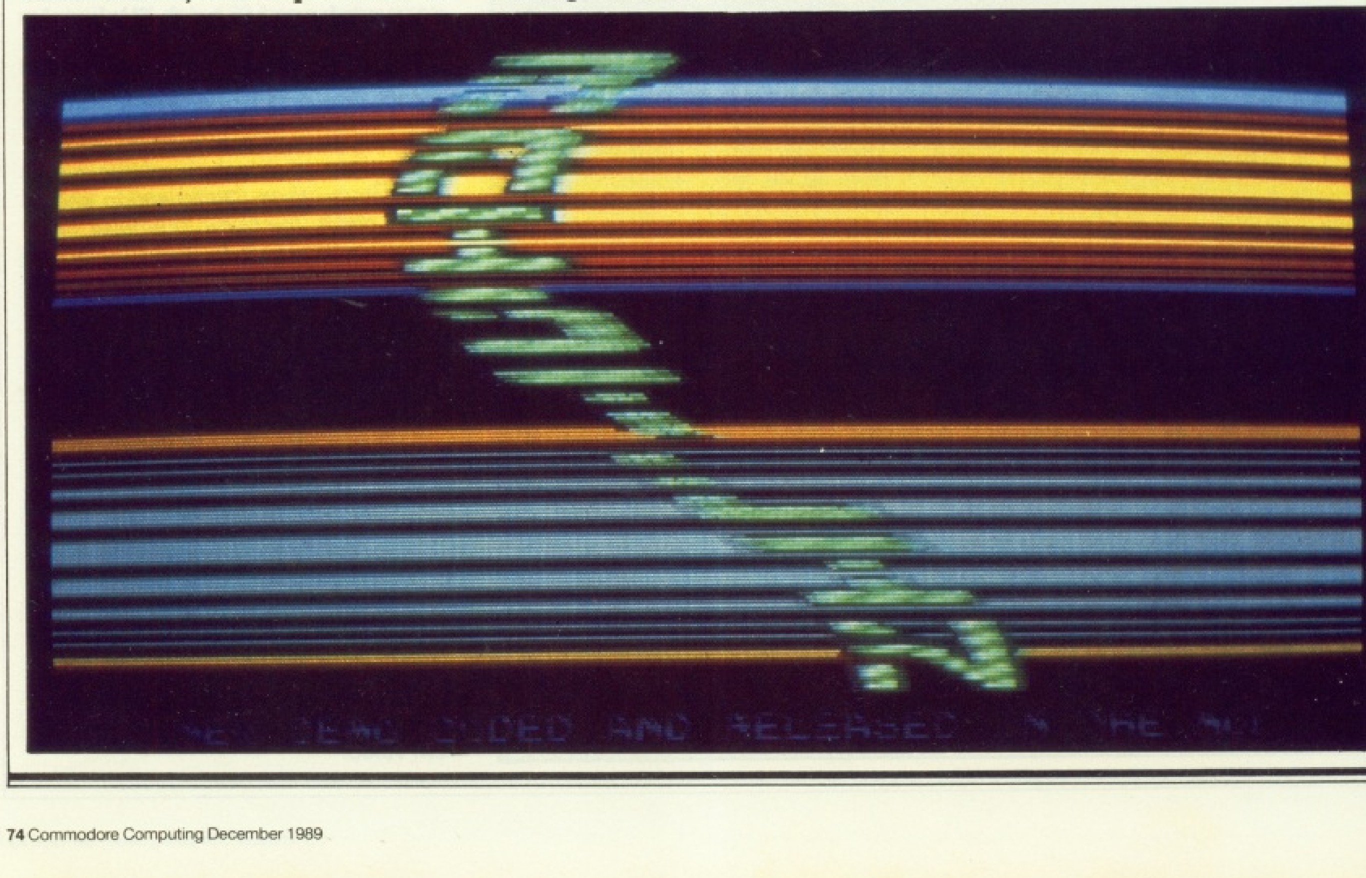
Pointless pieces of self-indulgence, or works of art? Two conflicting but equally justified views of demos. Some, however are anyway worth examining. Here we take a look at a selection of demos compiled by Robert Troughton.

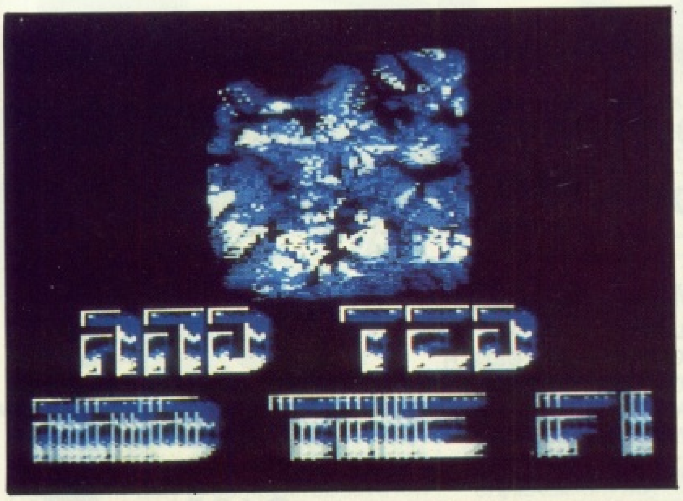
Star of the show is undoubtedly Morphoses from Beyond. After the traditional logo, the scroller makes way for the main attraction. In the centre of the screen, a portion of background graphics nabbed from Tetris materialises. Stick with it, and it proceeds to fade out, and back into a new image, followed by a third metamorphosis. Meanwhile the attractive (but almost illegible) text beneath does interesting things.

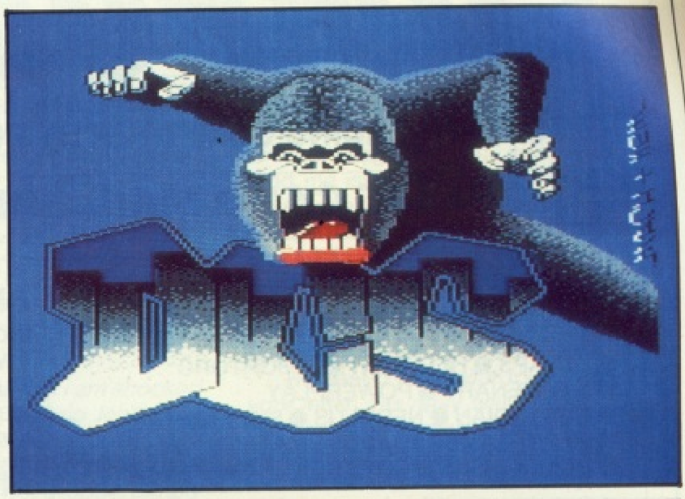
Others worth a mention include No Way! from FLT. The scroller goes to lengths to draw attention to its unexpanded graphics in the top and bottom borders, which I suppose are rather nice if you like that sort of thing. Time To Die from XS has a neat 'tubular' scroller nestled among bags of colour bars and bouncing logos. Finally there's Party Again! from Horizon. Following a pseudo 3D sinus-scroller and a few side-border scrolls, there's a fancy wave effect revealing two overlaid Horizon logos. Most of the rest are just the usual swirly sprite and scroller combinations. As always, the text in the scrollers is a ream of 'hellos', interspersed with the odd detail about how the programmer has been up from dawn last week and has not washed since.

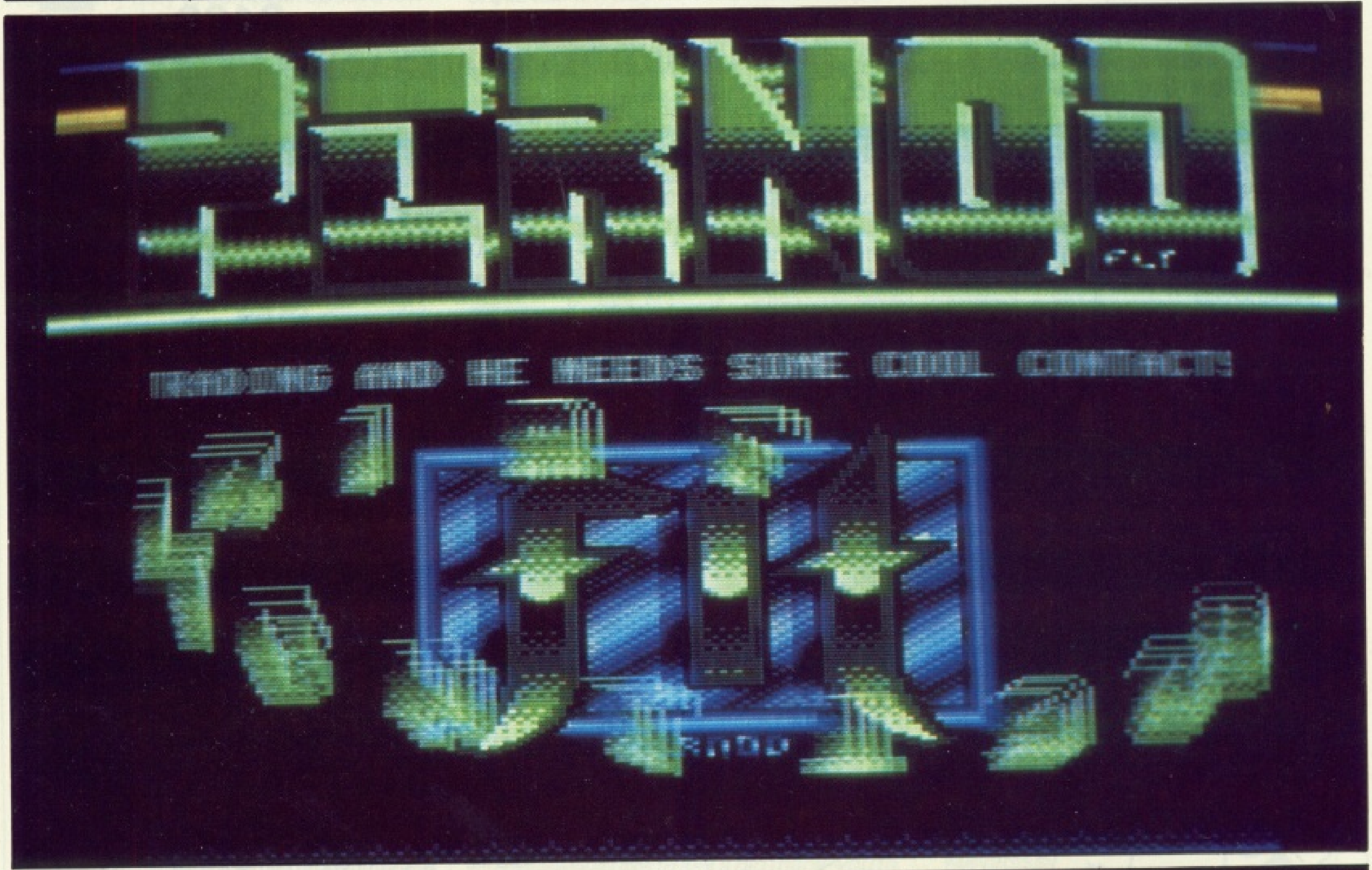
The better examples are worth getting hold of, so if you're interested you can get in touch with Robert (Demo) Troughton at this address (supplying your own disk and preferably something in return):

Robert Troughton
42 Browfield Terrace
Silsden
Keighley
West Yorkshire
BD20 9PT





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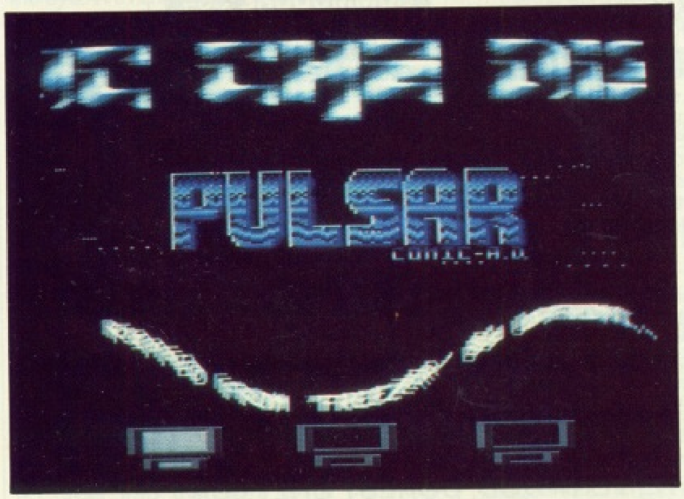
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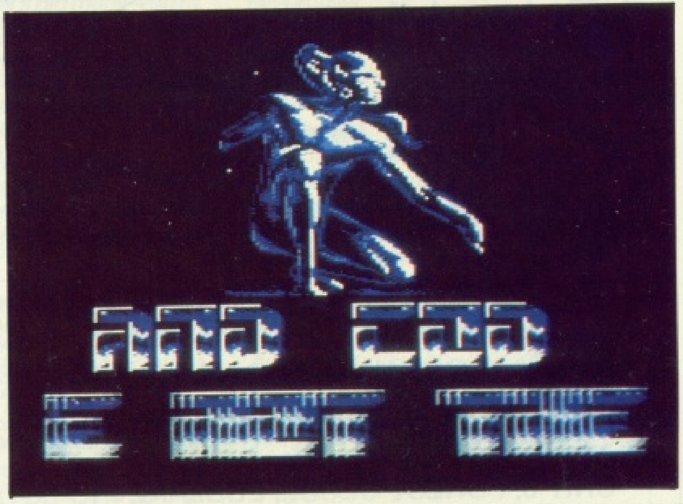

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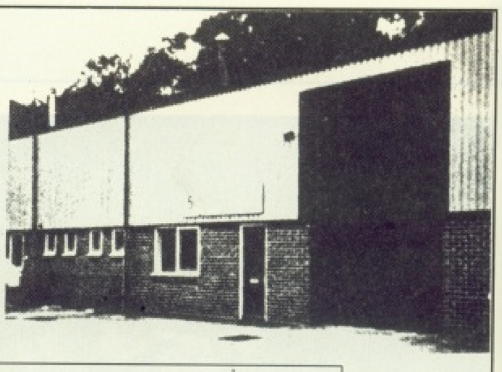

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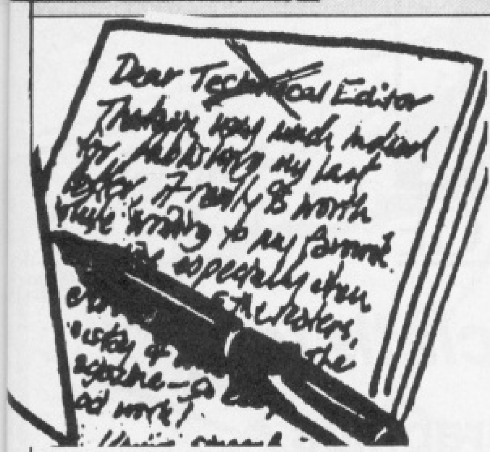
Dear ~~Technical~~ Editor
Thank you very much indeed for publishing my last letter. It really is worth while writing to my favourite mag especially when

Dear CCI,

First, thanks for a great mag. However, I feel it is my duty to complain about a few aspects with which I for one am not happy.Firstly, I do think that you could make more use of colour in the publication in order to make it look more professional. It's been around for sometime now and I for one think it could do with a style revamp. Secondly, I do find the contents page very hard to follow as it is not devided up into any kind of sectioning. It would be much easier to follow if the same kind of content was listed together. eg, features section, specials section, reviews section, games section.

Despite these complaints I do like your magazine as I feel that is has many interesting features and information, unlike some of the drivel you can buy. Looking forward to hearing from you,

Yours in anticipation,
Luke Magestin.

Dear Luke,

Many thanks Luke for complimenting the magazine we are glad that you think it is better than the other "drivel" that is on the newsagents' shelves. Regarding the contents page. For some time now we have been experimenting with various styles and colours. The most recent of which seems to have gained favour with a large section of our audience. Spreading the contents over two pages makes it less cramped looking and more appealing to the eye. We have thought about dividing it into separate sections but we do not feel that public opinion requires us to do so at present. Maybe if we receive a few more letters regarding this topic we will reconsider. So if anybody else has an opinion let us know.

Dear CCI,

Hey, how are ya doing. I want to tell you guys how ace I think your mag is. I think it's the best on the market for Commodore computers here in the States especially since they closed down 'Commodore Magazine and there used to be quite a few, I can tell you.

I think that yours is the best because it caters for everyone without going on too long on any one subject. Thus, I have put an order into the store for a constant supply. However, tragedy has struck and they tell me that they shall only be carrying your brill mag until the end of this year. I write to you distressed and appealing to find out how I can set myself up with a permanent life support system in the form of *CCI!*

Please, please let me know soon as time is running out......

Yours distressedly
Kent Peters
Michigan, USA

Dear Kent,

*First of all may I say that I am shocked that your newsagent will no longer be stocking our magazine we will be sending out a message to our U.S. distributor to get on his tail. anyway do not despair. Simply fill in the subscription form which appears in every iusue. Send it first class over to us here in London. And we will make sure you receive a copy every month. Also tell your friends to fill in the subs. form. We don't want any one not being able to receive our magazine. Thank you for the kind words expressed about **CCI**. I hope that you continue to find it to your liking.*

THANKS, AUSSIE PAT !!

We would like to say a big thank-you to Patrick Hallermann for sending us a cuddly bear all the way from Queensland in Australia. A note contained inside the package wished us all here at CCI good-luck for all future editions. The bear arrived on one of our hectic press days and cheered every body up no end. Receiving gifts such as these makes all our hard work seem worthwhile. Thank-you Patrick !! Good on you.

Dear CCI,

I write to you from Barcelona for advice.I have a long lasting need to become a expert at the computer and would like to set up a Spanish magazine centred around the Amiga and concentrating on games. We have not many computer magazines here and I think it would be good to become one.Your magazine is the best and so I would like some advice. Do I need any special training in computers? What subjects should I take at school? Your help I appreciate alot.Thank You CCI for your magazine. Oh, and could you send me issue June 1989. I have every cópy since 1987 except this one. I enclose a mailorder for postage.Yours in need

Maria-Pilar Pujol
Barcelona
Spain

Dear Maria-Pilar

*We asked the Editor to comment on your letter. His reply was "DON'T! Don't even think of starting a magazine unless you want to be bald and prematurely old at 24!" We don't think he was entirly serious as he seems healthy enough and doesn't look a day over 75! (of course it could be a wig!) Magazines today are big business and not something to start as a hobby. A 'Fanzine' on the other hand could be fun and even profitable. Plunge yourself into the material. Start to write about what interests you, photocopy the pages and send them to your friends or pen-pals. Try a free advertisment in **CCI**'s Classified. Eat, sleep, think and even dream about computers and what to say about them and go for it!*

Dear CCI,

How's about some letters in the next issue? And , even better some replies? I've written to you several times and so far not a comma has been printed in the mag! I write so desperately because I want to know how I could write an article for inclusion in your mind-blowingly good publication.ie, what sort of thing , what sort of style, etc. etc... Here I am, a desperately frustrated bod anxious to see my name in the CCI lights, and not even my letters reach the glossy pages of your treasured editions!

Any response would be appreciated, but if you print it......!!!!!

Yours frustratedly,
Tony Prosper
A Bros Fan...
Mevagissy

Dear Tony,

*So you finally get to air your views in CCI !!! The reason for a lack of readers letters over the past few months is due to lack of space. We don't just fill out the pages as some mags we could name. We try to pack in as much information as possible. But we don't think our magazine requires criticism. We are always willing to listen to our readers opinions. So we need to receive feedback, and we promise to respond accordingly. So, readers get your fingers tapping on your keyboards and your printers whirring with delight and let us know how you feel about this mag and what you would like to see in it. £10 and a **CCI** T-Shirt to the letter of the month (and maybe other goodies!!!!).*

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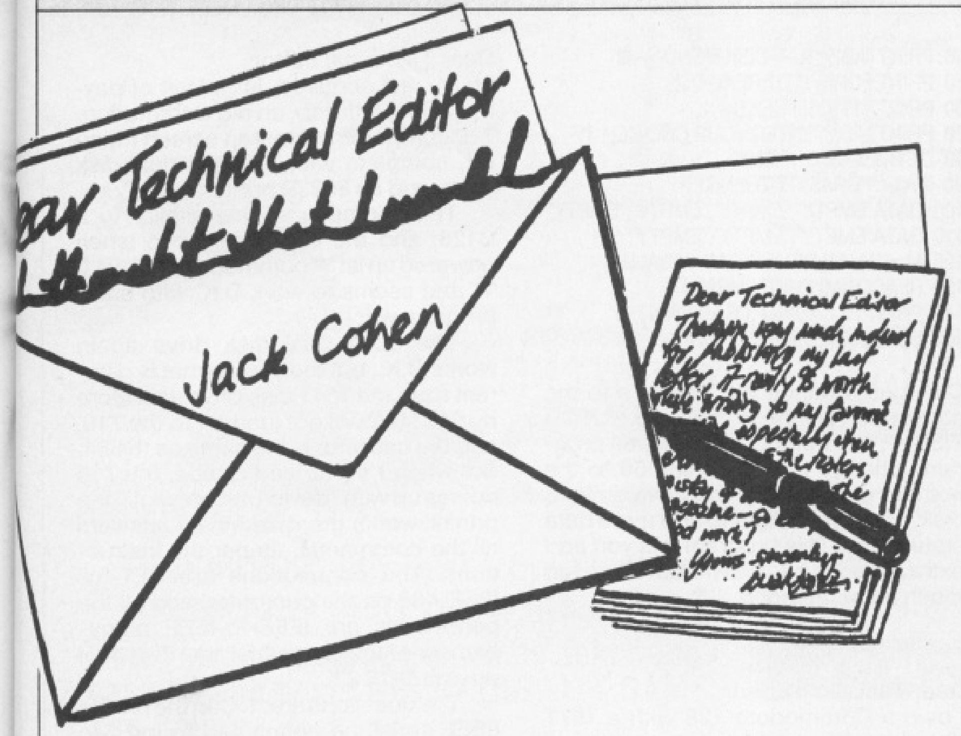

Dear Technical Editor
I am going to get an Amiga for Christmas, and am wondering about a few things:

1. Is it legal to copy and 'share' PD discs, like share ware?

2. Is there a good PC Emulator program, just for running games (at least, that's all I want it for) for the Amiga, and, if so, is there a good 5¼ inch drive that you could use effectively with the program?

3. I have heard rumours that there will be a new operating system (V1.4?) for the Amiga, is this true?

4. I am a little bit confused about viruses. If a disc has a virus on it, can it spread to other discs, or even damage the computer? How are viruses contracted?

Dear ???!,
1. It is legal to copy and share Public Domain disks since they have no copyright except that some have a 'NOT FOR SALE' notice.

However 'Shareware' is different in that if you make use of the program then you are expected to contribute a sum of money which entitles you to updates of the software and makes you a registered user.

Shareware can be copied and distributed freely subject to the above obligation.

2. No. Transformer was available for the A1000 with Version 1 kickstart only, but does not always work correctly.

Also for the A1000 was the Commodore 5.25 Sidecar which is a PC in a box.

This works by using the Amiga's monitor, keyboard and printer port.

For the B2000 Amiga a bridgeboard can be used with Amiga peripherals to make a PC. It is best to buy a small PC which start at around £300.00 rather than any of the above options.

3. Yes and I hope it will be released soon.

4. On power up the Amiga 'looks' at the boot block on the disk drive.

If it finds a 'jump' address then code is executed which puts the Virus in memory, and this remains in memory until power down (machine switched off).

On subsequent disk insertions this routine usually puts a message on the screen and writes all over the disk making it unseable.

This is why switching off the computer is recommended.

Also write protecting your disks will help to avoid this corruption, although this can be programmed around.

Dear Technical Editor
I have recently bought a C64C, and I am not sure on a few points I hope you can help me with.

1. Does all the previous software for the C64 run on the C64C as it seems a bit confusing when the packaging on software saya C64/C128?

2. Would the Reset Cartridge by Datel Electronics work on the C64C, and what is the procedure for entering pokes into programs using this cartridge, and finally could you recommend a good disk drive at a reasonable price. I enclose an S.A.E., and finally I think that your magazine is really fab, I do hope you can help me. I look forward to your reply.

Yours faithfully,

Robert Dudgeon

Dear Robert,
There should not be any problem provided the software has been written correctly, which means according to the CBM kernal conventions. C64/C128 means that the software will run on C64 and C128 in C64 mode. Of course it may mean that it works in either mode without switching and giving say an 80 col WP in C128 or a 40 col WP in C64 mode!

The Datel cartridge will work on the 64C. Choose the BASIC option from the menu and enter POKE's as direct commands followed by RETURN. Or choose the MACHINE CODE MONITOR and enter the HEX equivalent of the value to be POKEd in the HEX memory location indicated. For example POKE 49152,96 means enter the value $60 at location &C000. It is difficult to recommend a particular disk drive.

Some users prefer speed in loading and putting up with some programs which will not load because they are written in such a way that they use the disk ROM's for protection and therefore do not respond to non CBM disk drives. Most software houses now avoid this type of protection and their programs can be loaded from non standard drives.

Dear Technical Editor
Can you please tell me if there are any *good* programs for the Commodore 64 for putting titles onto video?

I have seen some excellent ones for the Amiga but none for the '64. I would be grateful for any information you could supply.

Yours,

S.W. Somerville

Dear S W Sommerville,
None that I know about. It is possible to use a digitiser but this would probably be more expensive than buying an Amiga.

Dear Technical Editor
As a fairly new reader of ***CCI***, I wondered if you could advise me on two problems.

1. Is the CBM 1581 3.5" Disk Drive Plus-4 compatible?

2. Can the CBM 1351 mouse be used by the PLUS 4?

I would greatly appreciate any help.
Yours sincerely,

Nicholas Otley

Dear Nicholas,
1. No.

2. Yes with the use of a socket converter

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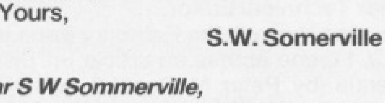


Dear Technical Editor

Please help! I have a C64 computer and a MCS 801 Commodore colour printer-/graphic printer. It will not download in colour for the GeoPaint program. On enquiring at two of my local computer shops, one told me that the C64 will not download colour graphics, as it is only an 8 bit machine built mainly for games.

At the other shop I enquired about the Star LC-10 colour printer, only to be told that it was being withdrawn from production, as it was not popular enough to keep in production.

Can you please advise me on both these subjects as I do not want to go to the large expense of changing over to the Amiga system, as over the last two years I have spent a lot of money on games and programs for the C64, a lot of which do not appear to be in the Amiga format.

If the Star LC-10 colour printer is no longer available can you please recommend an alternative?

Yours faithfully,

J.R. Mitton

Dear J R Mitton,

The person you spoke to in the first shop is talking rubbish. I suggest that you contact Jeff Hall at Meedmore on 051-521-2202 who, at the time of writing, have several STAR LC 10's in stock.

Dear Technical Editor

Reading through the February issue of ***CCI***, I came across an article on Disk Menus (by Peter McDonald), which I was very interested in because we had just got our 1541 II Disk Drive for our 64C. (Note: ***CCI*** comes about 3 months behind in New Zealand).

Intrigued, I set out writing one adapted for my own needs, and came up with a program that takes up less disk space than the one printed in ***CCI***, (find enclosed a copy). I was wondering if ***CCI*** readers would be interested in it because of the disk space it would save and its ease of use.

Yours sincerely,

Simon Brierley (Aged 14)

Simon has written a short MENU program which readers can try for themselves.

Key: **R** =Revs on. CTRL + 9
■ = Revs off CTRL + 0
L = Shifted 'L'
DISK MENU: For CCI
by Simon Brierley

```
5  REM(C)S.J.BRIERLEY 1989 L
7  REMDISK MENU FOR CCI 17 JULY L
10  PRINT CHR$(147):REM CLEAR THE SCREEN
20  POKE53281,1:POKE808,234
30  PRINT:PRINT:PRINT:PRINT
40  PRINTTAB(9)"R——DISK MENU——■"
50  PRINT:FORI=1TO7:READ Q$(I)
60  PRINT"("I")";Q$(I):NEXTI
70  PRINTTAB(7)"ENTER YOUR CHOICE(1-7)"
80  GETA$:IFA$=""THEN80
90  IFA$<"I"ORA$>"7"THEN80
100  DATA"EMPTY","EMPTY","EMPTY","EMPTY"
110  DATA"EMPTY","EMPTY","EMPTY"
120  M=VAL(A$):REMGIVE'M'–A$VALUE
130  READQ$(M):PRINTCHR$(147)
140  PRINT"RLOADING";Q$(M):PRINT"■"
150  LOADQ$(M),8,1:RUN
```

Changes: Change the "empty"s to the names of your programs, e.g. "UTILITIES+", etc. For more than seven programs change the '7' on line 50 to the number of programs you have on your disk. And don't forget to add more data statements. This program lets you add extra program names without using too much extra memory.

Dear Technical Editor

I own a Commodore 128 with a 1571 disk drive. The problem is if you format one side of a disk the other side (if it is dbl. sided) will have ? Bad Disk error. But if you header the other side of the disk the front side has its format erased and the data on side A is lost. Please can you tell me what the matter is?

Also, in your June edition a program by P.E. Buckland has 4 sheets of data – Rebound. Please can you tell me how I can get a short cut from al this data?

Yours,

Mosthaic Ahmed

Dear Mosthak,

The Disk operating system (DOS) will format both sides of a double-sided diskette without turning it over. The BAM and directory are on the upper side of the diskette. If you turn the diskette over and then format, then it will destroy the already formatted upper part and replace it with the bottom side (without BAM and directory). This is why you get a ? BAD DISK error.

Dear Technical Editor

I own a C16 and I collect ***CCI*** magazines, which I often look back at some of your older editions. I noticed the 64K RAM Board (page 52) for the C16 in Vol 4 No. 7, February 1986. I am no whiz kid, but if it provides 64K on the C16, would it be able to take C64 games and hardware? I look forward to your reply.

Yours sincerely,

Marcus Muddell

P.S. Could you send me the price and could I use a postal order to purchase it, and can it still be purchased by the company?

Dear Marcus,

The answer is no.

Dear Technical Editor

I have just acquired, in default of payment for a little job, an old Commodore 710 computer with green screen monitor, complete with an 8050 dual disk drive, and an 8023P printer.

The computer seems similar to a C128; and the on screen logo when powered up is: *** commodore 128, v4.0 *** and seems to work O.K. with basic program writing.

The 8050 dual disk drive again works O.K., but the disk format is different from my 1541 disk drive, therefore ny 64c stuff will not load on to the 710, and the cassette is the same as the 64, but when I try to load a tape, the 710 comes up with "device not present", the printer works great and even answers all the commands, as per the instructions. The connections are PET-to-IEEE-488 on the computer, and all the peripherals are IEEE-to-IEEE piggyback or plugs on a serial line. The dual drive is DOS 2.5

The questions are: 1. Can the printer (IEEE serial) be connected to my 64c with some form of interface cable?

2. Can the 1541 drive be connected to the 710 in place of the 8050, so that I can run 1541 format disks on the 710 and vice versa with with my 64c, again with some form of interface cable?

3. Can any software still be obtained for the 710/8050 combination, ie Word Processors, etc?

4. Last of all – where can any of the above be purchased from, should any be available, and what sort of cost would I be looking at?

My CBM 64C uses the normal DIN plugs/skts on the serial lines for daisy chaining, as you will know.

Congratulations on your superb mahgazine, keep those articles going!

I enclose an S.A.E. should you be able to assist.

Many thanks.

Yours sincerely,

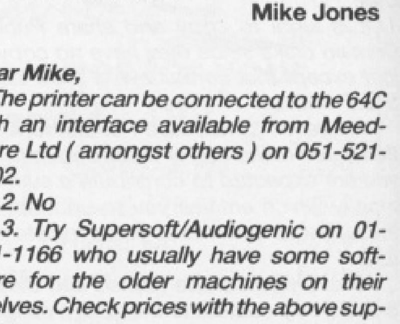
Mike Jones

Dear Mike,

1. The printer can be connected to the 64C with an interface available from Meedmore Ltd (amongst others) on 051-521-2202.

2. No

3. Try Supersoft/Audiogenic on 01-861-1166 who usually have some software for the older machines on their shelves. Check prices with the above suppliers.



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PPC 640S	447.82	515.00
PPC 512D	491.30	565.00
PPC 640D	626.08	720.00

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AMSTRAD PC1512	Price Ex. VAT	Price Inc. VAT
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PC1512 SD C/M	447.82	515.00
PC1512 DD C/M	534.78	615.00

AMSTRAD PC1640

AMSTRAD PC1640	Price Ex. VAT	Price Inc. VAT
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PC 1640 SD C/D	538.26	619.00
PC 1640 DD C/D	626.08	720.00
PC 1640 HD20 C/D	804.34	925.00
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PC 1640 DD M/D	538.26	619.00
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AMIGA B2000 HARDWARE	Price Ex. VAT	Price Inc. VAT
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As above but with 21" FST HRCM	POA	POA
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A2090/2090 AMIGA 20Mb HD	304.35	350.00
A2090A/2092 20Mb HD Auto Boot	466.87	536.90
A2090A/2094 40Mb HD Auto Boot	767.97	883.16
A2058 XT Bridgeboard + 5.25" 360Kb Floppy Drive 512Kb RAM	386.42	444.38
A2286 AT Bridgeboard ● 5.25" 1.2Mb Floppy Drive 1Mb RAM	609.50	700.92
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A2620 68020 Co-Processor board with 2Mb of 32 BIT RAM	POA	POA
A2058/2 2Mb D RAM Chip set for A2058	POA	POA
A2058/7 6Mb D RAM Chip set for A2058 board	POA	POA
A2032 PAL Composite Videocard	73.79	84.86
A2300 Internal Glenlock	181.63	208.87
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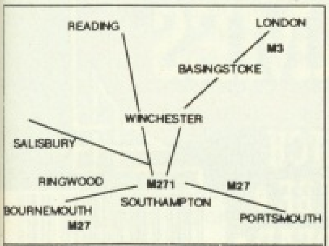

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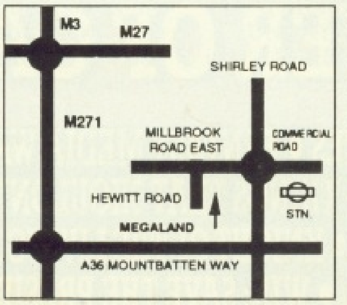

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Around the ICC

The Independent Compunet Club (ICC) has been in existence almost as long as Compunet itself. There are no joining or membership fees with the ICC — its run purely on the enthusiasm on its committee and members and provides a range of useful services both to old hands and new users alike.

Perhaps the ICC's most important activity is to act as a medium for liaison between Compunet's management and users. Though this function has become of less importance recently as Compunet's current owners are more often seen on the Net than their predecessors.

The ICC is also well-known for the online events it organises, including online parties, the ICC Master Quiz and even Compunet's first online Pantomime! Online parties in particular push the Compunet host computer to its peak loading as every telephone into the system gets used.

GOTO ICC takes users to the main directory of the ICC area. It is a Closed User Group (CUG) which means that while anyone can read most of the frames in the ICC area, only members can upload into those directories.

As well as providing directories for the day to day running of the club, the ICC area of the Compunet database contains a number of directories of more general interest.

Bitstream (GOTO YETI) is a computer news roundup updated fortnightly. Although there is an emphasis towards Commodore the area covers the whole range of personal computers. Recent issues have included news about Commodore's marketing campaigns, new microprocesors, printers, modems and the latest in two inch floppy disks. The only problem with the area is the use of multi-coloured text that makes it rather difficult to read at times ...

The Bitstream in-depth section goes into a lot more detail about particular aspects of the current state of the microcomputer world. The latest upload is a seventeen page account of the battle of PC bus standards between the EISA and MCA camps. Bitstream is written by YETI, who devised and wrote Compunet's Multi-User Game 'Federation II'.

If you want to argue about current affairs FORUM is the place to GOTO. Here TYGER organises discussions on various subjects in the news. ARENA already provides directories for this kind of discussion but it is hoped that by having a moderator to guide the discussion, and arguments, the results will be more interesting.

16-Bit and 8-Bit software areas at 16BIT and 8BIT contain technical articles and directories of free programs. Amongst the Commodore 64 software there are some very useful utilities for handling corrupted disks — the kind of software that is instructive to play around with but can on occasions be a life saver.

"To help guide new users through the system the ICC have set up a panel of experienced volunteers to act as 'helpers'."

Over thirty issues of the fortnightly ICC Sunday newspaper have been uploaded at SUNDAY making it a well established institution on the Net. Each issue comprises up to forty pages and includes news about Compunet, the ICC and its directories as well as a wide range of more general interest articles. Each issue also includes an in depth interview with a prominent Cnetter.

SUNDAY is a sub-directory of the ICC's PRESS area that also contains NFLASH for the latest online news flashes and ALT for the 'Alternative News'.

'Mega Metal Mania' by MAK (GOTO METAL) contains some of the best written album reviews on Compunet. Heavy Metal is not everyone's cup of tea but for those interested in the louder kinds of Rock music MAK 'and his totally amazing Metal cliches' is a must.

For newcomers to the sytem finding their way through the myriad of directories and mastering Compunet's various facilities such as PartyLine, Fed and the Newsbytes Gateway can be rather confusing. To help guide new users through the system the ICC have set up a panel of experienced volunteers to act as 'helpers'. To users new to the comms world or new to computers in general such help and advice can be invaluable.

To join the Independent Compunet Club GOTO DIRECT and SHOW the 'Registration' entry. The relevant details can be filled in with the Compunet frame editor and then Courier, Compunet's electronic mail system, used to send it to '-ICC'. It costs nothing but a little time!

There is a lot more to the ICC area on Compunet than there is room to describe here. There's the technical conference room at TECH, the interview archives at TALKS, Compunet Classics at GEMS and the highly successful 30+ area where the pace is a little more leisurely.

The ICC organise stands at most relevant computers shows. At the recent PC Show at Earl's Court they had a video presentation of a tour around the Compunet system, and live demonstrations of Compunet's Multi-User Game and Chat facilities. For those interested in joining Compunet the stand is an excellent way to meet existing users and be taken through the systems capabilities.

The ICC exists to further in interests of Compunet users and its therefore in the best interests of every Cnetter to join and support it. The ICC's support for the system has been an enormous service to both Compunet and its users.

J.L.

CONTINUED FROM LAST MONTH

Conversion

Cpl D. Baillie C64, C128, +4

Although the program may seem very long, it is easy to enter if you look carefully. It gives you many types of numeric conversions.

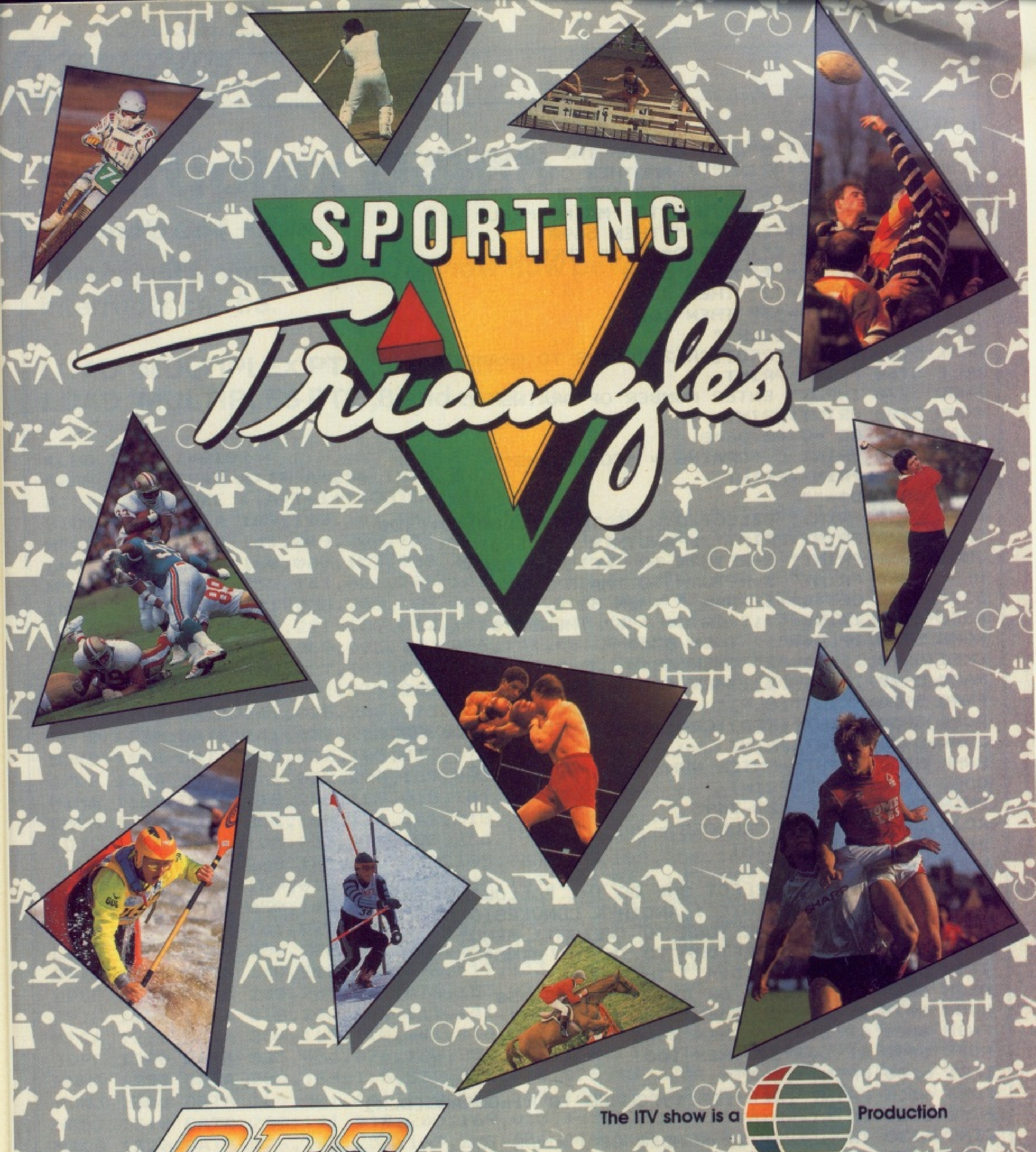
```
FFOM 3900 IF D$ <"1" OR D$ >"3" THEN3890
IEDJ 3910 IF D$="1" THEN 3760
PBKF 3920 IF D$="2" THEN 3220
MMAL 3930 IF D$="3" THEN 100
FHGO 3940 PRINT"[CLR]"
EPEE 3950 PRINT"[RED][CR9]LITRES TO GALLONS[BLK]"
MMHO 3960 PRINT:PRINT
GOEI 3970 INPUT" ENTER NUMBER OF LITRES";C
NMAG 3980 PRINT:PRINT
FLBM 3990 CC =C *0.22
OCBK 4000 PRINT C "LITRES = "CC "GALLONS"
GNOD 4010 PRINT:PRINT
HLMP 4020 D$=""
HDHB 4030 PRINT" SELECT ONE OF THE FOLLOWING:";D$
IELB 4040 PRINT:PRINT" 1-ANOTHER CONVERSION"
MAFL 4050 PRINT" 2-RETURN TO 'VOLUME' MENU"
PLAI 4060 PRINT" 3-RETURN TO 'MAIN' MENU"
OECC 4070 GET D$:IF D$="" THEN 4070
MICA 4080 IF D$ <"1" OR D$ >"3" THEN4070
NHLH 4090 IF D$="1" THEN 3940
MCDI 4100 IF D$="2" THEN 3220
CMDI 4110 IF D$="3" THEN 100
IDIH 4120 PRINT"[CLR]"
OBBO 4130 PRINT"[RED][CR3]CUBIC INCHES TO CUBIC CENTIMETERS[BLK]"
OKLF 4140 PRINT:PRINT
BKHL 4150 INPUT" ENTER NUMBER OF CUBIC INCHES";C
DHBA 4160 PRINT:PRINT
BAPM 4170 CC =C *16.3871
CDFJ 4180 PRINT C "CUBIC INCHES = "CC "CUBIC CENTIMETERS"
MJLK 4190 PRINT:PRINT
HFMG 4200 D$=""
KEKD 4210 PRINT" SELECT ONE OF THE FOLLOWING:";D$
MCJA 4220 PRINT:PRINT" 1-ANOTHER CONVERSION"
OKBN 4230 PRINT" 2-RETURN TO 'VOLUME' MENU"
NJKN 4240 PRINT" 3-RETURN TO 'MAIN' MENU"
CBIH 4250 GET D$:IF D$="" THEN 4250
EFLD 4260 IF D$ <"1" OR D$ >"3" THEN4250
GAFO 4270 IF D$="1" THEN 4120
OILD 4280 IF D$="2" THEN 3220
PFBC 4290 IF D$="3" THEN 100
BKBI 4300 PRINT"[CLR]"
PKPO 4310 PRINT"[RED][CR9]CUBIC INCHES TO LITRES[BLK]"
CJMF 4320 PRINT:PRINT
PJDD 4330 INPUT" ENTER NUMBER OF CUBIC INCHES";C
EPCL 4340 PRINT:PRINT
LBFL 4350 CC =C *0.016387
CFOO 4360 PRINT C "CUBIC INCHES = "CC "LITRES"
HMFM 4370 PRINT:PRINT
MPEA 4380 D$=""
FGOH 4390 PRINT" SELECT ONE OF THE FOLLOWING:";D$
```

```
DNLE 4400 PRINT:PRINT" 1-ANOTHER CONVERSION"
OAOC 4410 PRINT" 2-RETURN TO 'VOLUME' MENU"
LOEC 4420 PRINT" 3-RETURN TO 'MAIN' MENU"
GPGI 4430 GET D$:IF D$="" THEN 4430
CKLO 4440 IF D$ <"1" OR D$ >"3" THEN4430
JJAE 4450 IF D$="1" THEN 4300
AKDB 4460 IF D$="2" THEN 3220
ENPA 4470 IF D$="3" THEN 100
LLLA 4480 PRINT"[CLR]"
MMGC 4490 PRINT"[RED][CR11]PINTS TO LITRES[BLK]"
BKMC 4500 PRINT:PRINT
IGHK 4510 INPUT" ENTER NUMBER OF PINTS";C
MHGH 4520 PRINT:PRINT
BLLP 4530 CC =C *0.47317
LKNJ 4540 PRINT C "PINTS = "CC "LITRES"
EPFL 4550 PRINT:PRINT
IKDF 4560 D$=""
BAPB 4570 PRINT" SELECT ONE OF THE FOLLOWING:";D$
KABK 4580 PRINT:PRINT" 1-ANOTHER CONVERSION"
BCHP 4590 PRINT" 2-RETURN TO 'VOLUME' MENU"
JMOH 4600 PRINT" 3-RETURN TO 'MAIN' MENU"
KKMN 4610 GET D$:IF D$="" THEN 4610
FLPB 4620 IF D$ <"1" OR D$ >"3" THEN4610
MEBP 4630 IF D$="1" THEN 4480
FJHJ 4640 IF D$="2" THEN 3220
KPKD 4650 IF D$="3" THEN 100
NLID 4660 PRINT"[CLR]"
CKNH 4670 PRINT"[RED][CR11]GALLONS TO LITRES[BLK]"
BLAF 4680 PRINT:PRINT
IKBP 4690 INPUT" ENTER NUMBER OF GALLONS";C
LPFM 4700 PRINT:PRINT
KDCD 4710 CC =C *4.546
OMOL 4720 PRINT C "GALLONS = "CC "LITRES"
IMCL 4730 PRINT:PRINT
IEDM 4740 D$=""
MHCD 4750 PRINT" SELECT ONE OF THE FOLLOWING:";D$
NDHM 4760 PRINT:PRINT" 1-ANOTHER CONVERSION"
EMAM 4770 PRINT" 2-RETURN TO 'VOLUME' MENU"
KKAJ 4780 PRINT" 3-RETURN TO 'MAIN' MENU"
BDLA 4790 GET D$:IF D$="" THEN 4790
OLOL 4800 IF D$ <"1" OR D$ >"3" THEN4790
GLCA 4810 IF D$="1" THEN 4660
PGNK 4820 IF D$="2" THEN 3220
JOAM 4830 IF D$="3" THEN 100
OOPA 4840 PRINT"[CLR]"
HIBF 4850 PRINT"[RED][CR15]WEIGHT[BLK]"
HDKH 4860 PRINT:PRINT
DJLO 4870 PRINT" 1-GRAMS - GRAINS"
HMIF 4880 PRINT" 2-GRAMS - OUNCES"
AFMK 4890 PRINT" 3-KILOGRAMS - POUNDS"
ABIJ 4900 PRINT" 4-TONNE - TONS"
DOEJ 4910 PRINT
BDOE 4920 PRINT" 5-GRAINS - GRAMS"
NLOF 4930 PRINT" 6-OUNCES - GRAMS"
MNFI 4940 PRINT" 7-POUNDS - KILOGRAMS"
KMAC 4950 PRINT" 8-TONS - TONNE"
KBGI 4960 PRINT:PRINT
AABM 4970 B$=""
PAJM 4980 PRINT" SELECT ONE BY PRESSING THE APPROPRIATE[SP2]NUMBER (1-8)";B$
MOGL 4990 GET B$: IF B$="" THEN 4990
FOFL 5000 IF B$ <"1" OR B$>"8" THEN 4990
NFPE 5010 ON VAL (B$) GOTO 5020,5200,5380,5560,5740,5920,6100,6280
```

continued on page 88

continued from page 87

```
EMHP 5020 PRINT"[CLR]"
FNBM 5030 PRINT"[RED][CR11]GRAMS TO GRAINS[BLK]"
PHHN 5040 PRINT:PRINT
OHKA 5050 INPUT" ENTER NUMBER OF GRAMS";C
CKNI 5060 PRINT:PRINT
JAPC 5070 CC =C *15.43
PGKB 5080 PRINT C "GRAMS = "CC "GRAINS"
NEHC 5090 PRINT:PRINT
KKOI 5100 D$=""
NFJK 5110 PRINT" SELECT ONE OF THE FOLLOWING:";D$
NCCL 5120 PRINT:PRINT" 1-ANOTHER CONVERSION"
AICA 5130 PRINT" 2-RETURN TO 'WEIGHT' MENU"
DDDI 5140 PRINT" 3-RETURN TO 'MAIN' MENU"
PJKL 5150 GET D$:IF D$="" THEN 5150
OHDH 5160 IF D$ <"1" OR D$ >"3" THEN5150
IFDH 5170 IF D$="1" THEN 5020
GHHI 5180 IF D$="2" THEN 4840
FJGA 5190 IF D$="3" THEN 100
NFOA 5200 PRINT"[CLR]"
LEEM 5210 PRINT"[RED][CR12]GRAMS TO OUNCES[BLK]"
DEAN 5220 PRINT:PRINT
PAHF 5230 INPUT" ENTER NUMBER OF GRAMS";C
FCOD 5240 PRINT:PRINT
CAJO 5250 CC =C *0.035274
ECLC 5260 PRINT C "GRAMS = "CC "OUNCES"
GBJE 5270 PRINT:PRINT
MLLM 5280 D$=""
LPJE 5290 PRINT" SELECT ONE OF THE FOLLOWING:";D$
IOKJ 5300 PRINT:PRINT" 1-ANOTHER CONVERSION"
BIHM 5310 PRINT" 2-RETURN TO 'WEIGHT' MENU"
CEON 5320 PRINT" 3-RETURN TO 'MAIN' MENU"
KCBL 5330 GET D$:IF D$="" THEN 5330
OMBM 5340 IF D$ <"1" OR D$ >"3" THEN5330
NBFA 5350 IF D$="1" THEN 5200
CIMH 5360 IF D$="2" THEN 4840
OKCP 5370 IF D$="3" THEN 100
KCDO 5380 PRINT"[CLR]"
LFPM 5390 PRINT"[RED][CR10]KILOGRAMS TO POUNDS[BLK]"
AHAK 5400 PRINT:PRINT
EFIA 5410 INPUT" ENTER NUMBER OF KILOGRAMS";C
NKKP 5420 PRINT:PRINT
FOOJ 5430 CC =C *2.20462
CKPI 5440 PRINT C "KILOGRAMS = "CC "POUNDS"
FCJD 5450 PRINT:PRINT
IOMJ 5460 D$=""
PJIC 5470 PRINT" SELECT ONE OF THE FOLLOWING:";D$
OBHC 5480 PRINT:PRINT" 1-ANOTHER CONVERSION"
PNBD 5490 PRINT" 2-RETURN TO 'WEIGHT' MENU"
HGHC 5500 PRINT" 3-RETURN TO 'MAIN' MENU"
HCOB 5510 GET D$:IF D$="" THEN 5510
PJHF 5520 IF D$ <"1" OR D$ >"3" THEN5510
COAJ 5530 IF D$="1" THEN 5380
NGLC 5540 IF D$="2" THEN 4840
ADNB 5550 IF D$="3" THEN 100
KGFG 5560 PRINT"[CLR]"
NELN 5570 PRINT"[RED][CR13]TONNE TO TONS[BLK]"
KDFD 5580 PRINT:PRINT
HHJF 5590 INPUT" ENTER NUMBER OF TONNE";C
KCJE 5600 PRINT:PRINT
BCJN 5610 CC =C *0.9842
HMKO 5620 PRINT C "TONNE = "CC "TONS"
JBOD 5630 PRINT:PRINT
```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JEZ
PETE
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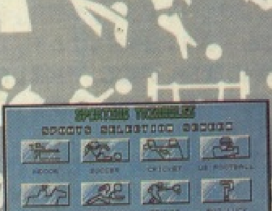
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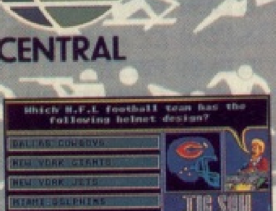
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```
IAMA 5640 D$=""
COFA 5650 PRINT" SELECT ONE OF THE FOLLOWING:";D$
JCBE 5660 PRINT:PRINT" 1-ANOTHER CONVERSION"
KDGA 5670 PRINT" 2-RETURN TO 'WEIGHT' MENU"
PIIB 5680 PRINT" 3-RETURN TO 'MAIN' MENU"
MBDD 5690 GET D$:IF D$="" THEN 5690
PONA 5700 IF D$ <"1" OR D$ >"3" THEN5690
HMCF 5710 IF D$="1" THEN 5560
IOFH 5720 IF D$="2" THEN 4840
COIJ 5730 IF D$="3" THEN 100
DPMJ 5740 PRINT"[CLR]"
MNKL 5750 PRINT"[RED][CR12]GRAINS TO GRAMS[BLK]"
BGLF 5760 PRINT:PRINT
AHCD 5770 INPUT" ENTER NUMBER OF GRAINS";C
AGMN 5780 PRINT:PRINT
JCAP 5790 CC =C *0.0648
BJNG 5800 PRINT C "GRAINS = "CC "GRAMS"
DEJM 5810 PRINT:PRINT
PNJC 5820 D$=""
DHAN 5830 PRINT" SELECT ONE OF THE FOLLOWING:";D$
CKHM 5840 PRINT:PRINT" 1-ANOTHER CONVERSION"
JMNI 5850 PRINT" 2-RETURN TO 'WEIGHT' MENU"
BFPK 5860 PRINT" 3-RETURN TO 'MAIN' MENU"
JJEI 5870 GET D$:IF D$="" THEN 5870
AJPC 5880 IF D$ <"1" OR D$ >"3" THEN5870
KGMH 5890 IF D$="1" THEN 5740
CKFJ 5900 IF D$="2" THEN 4840
NACN 5910 IF D$="3" THEN 100
FNNO 5920 PRINT"[CLR]"
DCAA 5930 PRINT"[RED][CR13]OUNCES TO GRAMS[BLK]"
LDMK 5940 PRINT:PRINT
BNMK 5950 INPUT" ENTER NUMBER OF OUNCES";C
GOGP 5960 PRINT:PRINT
PHIN 5970 CC =C *28.3495
KCJG 5980 PRINT C "OUNCES = "CC "GRAMS"
JAMF 5990 PRINT:PRINT
HMDP 6000 D$=""
HGEF 6010 PRINT" SELECT ONE OF THE FOLLOWING:";D$
EAEA 6020 PRINT:PRINT" 1-ANOTHER CONVERSION"
HHLC 6030 PRINT" 2-RETURN TO 'WEIGHT' MENU"
HMLN 6040 PRINT" 3-RETURN TO 'MAIN' MENU"
IEIA 6050 GET D$:IF D$="" THEN 6050
GEJM 6060 IF D$ <"1" OR D$ >"3" THEN6050
KJOM 6070 IF D$="1" THEN 5920
FNJM 6080 IF D$="2" THEN 4840
KGFK 6090 IF D$="3" THEN 100
IFOI 6100 PRINT"[CLR]"
FDBJ 6110 PRINT"[RED][CR11]POUNDS TO KILOGRAMS[BLK]"
BCFE 6120 PRINT:PRINT
CINC 6130 INPUT" ENTER NUMBER OF POUNDS";C
HELK 6140 PRINT:PRINT
LFOL 6150 CC =C *0.4536
JCKE 6160 PRINT C "POUNDS = "CC "KILOGRAMS"
EHMN 6170 PRINT:PRINT
MGLJ 6180 D$=""
IEAB 6190 PRINT" SELECT ONE OF THE FOLLOWING:";D$
BMMC 6200 PRINT:PRINT" 1-ANOTHER CONVERSION"
GHOO 6210 PRINT" 2-RETURN TO 'WEIGHT' MENU"
GLGI 6220 PRINT" 3-RETURN TO 'MAIN' MENU"
NPDA 6230 GET D$:IF D$="" THEN 6230
GPLH 6240 IF D$ <"1" OR D$ >"3" THEN6230
FDNH 6250 IF D$="1" THEN 6100
```

Multiplex Demo

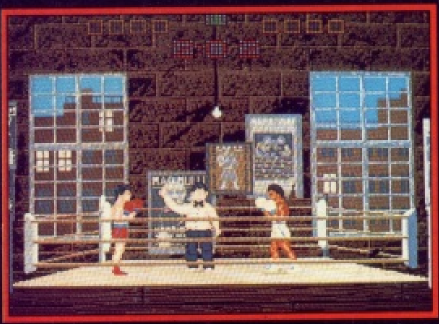
S. Patullo C64 + 128

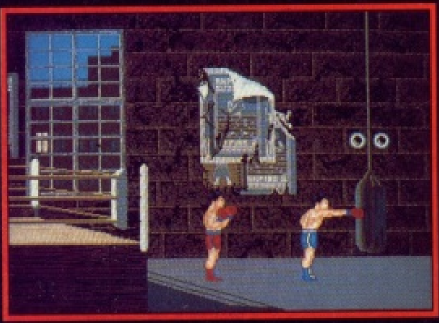
This is just a simple demo to show how powerful raster interrupts can be.

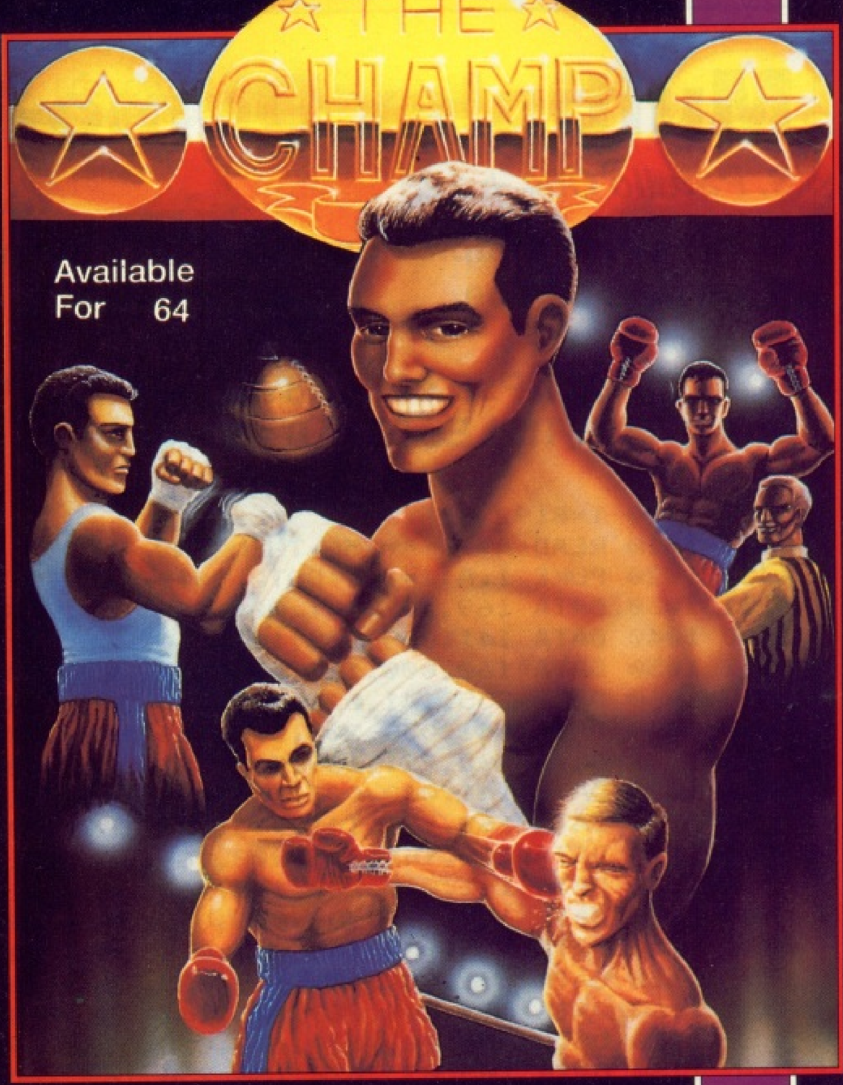
LOAD "MULTIPLEX PT1",8 and run in
LOAD "MULTIPLES PT2",8 and run this

```
KLBD 1000 I=8192
GBDM 1010 READ A:IF A=256 THEN END
AJCI 1020 POKE I,A:I=I+1:GOTO 1010
BIDI 1030 DATA 169,100,141,001,208,141,003,208,141,005,208,141,007,208
MFCD 1040 DATA 141,009,208,141,011,208,141,013,208,141,015,208,169,020
LNII 1050 DATA 160,000,153,000,208,105,020,200,200,192,016,208,245,169
NMFH 1060 DATA 255,141,021,208,141,028,208,169,010,141,039,208,169,001
LMDH 1070 DATA 141,038,208,169,000,141,037,208,173,000,221,041,254,141
PPFA 1080 DATA 000,221,169,002,141,024,208,169,064,141,136,002,169,000
IADL 1090 DATA 141,060,003,169,096,141,061,003,169,147,032,210,255,120
DAJO 1100 DATA 169,127,141,013,220,169,000,141,020,003,169,006,141,032
JNND 1110 DATA 208,141,033,208,169,033,141,021,003,169,001,141,026,208
FOOM 1120 DATA 141,025,208,173,064,003,141,018,208,173,017,208,041,127
FNHD 1130 DATA 141,017,208,088,096,141,018,208,169,011,141,032,208,169
BGKD 1140 DATA 055,032,105,033,076,188,254,169,110,141,018,208,169,012
JPDP 1150 DATA 141,032,208,169,085,032,105,033,076,188,254,169,140,141
MIMA 1160 DATA 018,208,169,015,141,032,208,169,115,032,105,033,076,188
DMEH 1170 DATA 254,169,170,141,018,208,169,001,141,032,208,169,145,032
FDJL 1180 DATA 105,033,076,188,254,169,200,141,018,208,169,015,141,032
OHKB 1190 DATA 208,169,175,032,105,033,076,188,254,169,248,141,018,208
JJLO 1200 DATA 169,012,141,032,208,169,205,032,105,033,076,188,254,169
PFED 1210 DATA 050,141,018,208,173,025,208,041,001,208,003,076,049,234
HGKM 1220 DATA 141,025,208,173,018,208,201,050,208,003,076,063,033,201
LILJ 1230 DATA 080,208,003,076,081,033,201,110,208,003,076,099,033,201
BIID 1240 DATA 140,208,003,076,117,033,201,170,208,003,076,135,033,201
DPLC 1250 DATA 200,208,003,076,153,033,201,248,240,109,234,169,080,141
PPIH 1260 DATA 018,208,169,011,141,032,208,169,055,032,025,034,076,188
KEFA 1270 DATA 254,169,110,141,018,208,169,012,141,032,208,169,085,032
JDPF 1280 DATA 025,034,076,188,254,169,140,141,018,208,169,015,141,032
HNHG 1290 DATA 208,169,115,032,025,034,076,188,254,169,170,141,018,208
PONJ 1300 DATA 169,001,141,032,208,169,145,032,025,034,076,188,254,169
NCBJ 1310 DATA 200,141,018,208,169,015,141,032,208,169,175,032,025,034
NACB 1320 DATA 076,188,254,169,248,141,018,208,169,012,141,032,208,169
MPGM 1330 DATA 205,032,025,034,076,188,254,169,050,141,018,208,169,006
FJEN 1340 DATA 141,032,208,173,061,003,141,248,067,141,249,067,141,250
BHKO 1350 DATA 067,141,251,067,141,252,067,141,253,067,141,254,067,141
EACO 1360 DATA 255,067,169,001,141,067,003,160,000,185,000,208,024,105
ANOD 1370 DATA 001,153,000,208,144,009,173,016,208,077,067,003,141,016
LFBN 1380 DATA 208,200,200,024,046,067,003,192,016,208,226,173,063,003
MGFM 1390 DATA 201,005,208,023,238,061,003,173,061,003,201,102,208,005
DIHL 1400 DATA 169,096,141,061,003,169,000,141,063,003,076,022,034,238
PPHI 1410 DATA 063,003,076,049,234,160,000,153,001,208,200,200,192,016
AHHH 1420 DATA 208,247,096,000,000,000,000,000,000,000,000,000,000,000
MJKL 1430 DATA 256
S-ENTRY CODE = KCPO
```

continued on page 95







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S-ENTRY

```
100 REM
110 REM*******************************
120 REM*                             *
130 REM*         CCI S-ENTRY         *
140 REM*                             *
150 REM*      FOR THE C64 & C128     *
160 REM*                             *
170 REM*(C)1989,A.ESKELSON & G.CATTLEY*
180 REM*                             *
190 REM*******************************
200 REM
210 M1=256*PEEK(179)+PEEK(178):C8=65281:C9=C8-2:FA=250:FB=251:FC=252
220 POKE C8,00:REM IF 128 SET BANK 0
230 MC=M1+9:CC=0:FOR I=0 TO 61:READ ZZ
240 CC=CC+ZZ:POKE M1+I,ZZ:NEXT I
250 REM DATA FOR CRC
260 DATA 169,000,133,250,133,251,133,252,096,169,000,133,252,162,008,165
270 DATA 250,042,038,253,042,042,042,042,042,069,253,133,253,165,250,069
280 DATA 253,133,253,165,251,042,042,042,069,253,133,253,038,252,042,069
290 DATA 253,106,038,251,038,250,202,208,214,166,251,165,250,096
300 IF CC<>9069 THEN PRINT"ERROR IN CHECKSUM DATA":STOP
310 REM
320 REM TEST FOR C128/C64
330 IF M1=2816 THEN C64=2:SA=3072:GOTO 360
340 IF M1=828 THEN C64=1:SA=49152:GOTO 360
350 PRINT"ERROR NOT C64 OR C128 ?":STOP
360 READ TC:EQ=0:EA=SA:SYS M1
370 HB=INT(SA/256):LB=0
380 REM START OF LOOP
390 READ DA$:REM READ THE DATA
400 IF DA$="-9999" THEN 480:REM FINISHED ALL THE DATA
410 DA=VAL(DA$):PRINTSA;CHR$(145)
420 IF LEN(DA$)<>3 THEN 450
430 POKE SA,DA:SA=SA+1
440 POKE MC+1,DA:SYS MC:GOTO 390
450 A%=PEEK(FA):X%=PEEK(FB):CK=A%*256+X%
460 IF CK<>VAL(DA$) THEN EQ=1:GOTO 480
470 GOTO 390
480 IF EQ OR (CK<>TC) THEN 510
490 POKE FA,LB:POKE FB,HB:POKE FC,C64:SYS EA
500 PRINTCHR$(147);"S-ENTRY ACTIVE. TYPE '@NEW' TO CLEAR LOADER":END
510 PRINT"LINE/DATA ERROR IN LINE";
520 PRINT PEEK(66)*256+PEEK(65):END
530 DATA 44232
540 DATA 024,165,250,105,028,133,176,165,251,105,002,133,177,169,000,170,48900
550 DATA 168,024,177,176,133,254,200,177,176,101,251,133,255,200,177,176,00903
560 DATA 201,255,240,008,024,101,251,129,254,200,208,229,024,165,250,105,18744
570 DATA 112,133,176,165,251,105,002,133,177,024,165,250,105,126,133,254,17887
580 DATA 165,251,105,000,133,255,162,000,164,252,177,176,072,161,176,240,44466
590 DATA 017,168,104,145,254,165,176,024,105,003,133,176,144,002,230,177,32098
600 DATA 208,230,104,169,000,141,005,003,169,126,141,004,003,169,000,133,49661
610 DATA 252,173,038,003,141,152,002,173,039,003,141,153,002,096,160,000,49456
620 DATA 132,251,132,250,132,180,132,254,132,253,185,000,002,201,032,208,52892
630 DATA 003,200,208,246,201,095,208,017,072,169,171,141,038,003,169,002,22812
640 DATA 141,039,003,032,154,002,104,208,053,072,173,152,002,141,038,003,55274
650 DATA 173,153,002,141,039,003,104,201,064,240,035,201,033,240,013,201,41233
660 DATA 038,208,033,076,068,001,173,141,002,208,251,096,169,067,141,005,20351
670 DATA 003,169,013,141,004,003,169,000,153,000,002,076,013,067,032,128,63881
680 DATA 003,024,144,247,165,252,240,007,169,000,133,252,024,144,236,132,15406
690 DATA 252,152,024,105,004,168,185,000,002,240,007,032,211,001,200,208,05629
700 DATA 245,000,164,252,162,001,185,000,002,072,169,032,153,000,002,104,21893
710 DATA 056,233,065,024,010,010,010,010,133,252,200,185,000,002,072,169,54075
720 DATA 032,153,000,002,104,056,233,065,041,015,005,252,213,250,208,011,11281
730 DATA 200,202,016,210,169,255,133,252,076,209,077,169,000,133,252,162,54224
740 DATA 022,108,000,003,162,001,181,045,149,176,202,016,249,141,001,255,56924
750 DATA 160,000,132,251,132,250,132,180,132,254,132,253,160,001,177,176,45691
760 DATA 240,040,200,177,176,032,211,001,200,177,176,032,211,001,200,177,58968
770 DATA 176,240,007,032,211,001,200,016,246,000,160,000,132,254,177,176,22791
780 DATA 170,200,177,176,134,176,133,177,208,210,160,000,140,000,255,185,63767
790 DATA 154,001,240,022,032,210,255,200,208,245,083,045,069,078,084,082,26008
800 DATA 089,032,067,079,068,069,032,061,032,000,162,001,181,250,072,041,42873
810 DATA 240,074,074,074,074,024,105,065,032,210,255,104,041,015,024,105,62214
820 DATA 065,032,210,255,202,016,229,141,003,255,169,000,141,000,002,076,51028
830 DATA 222,000,096,201,034,208,008,072,165,254,073,255,133,254,104,201,08627
840 DATA 032,208,004,036,254,016,052,133,180,169,001,072,165,251,041,128,08832
850 DATA 042,038,253,165,251,041,008,106,106,106,069,253,133,253,165,251,26391
860 DATA 069,253,133,253,165,250,042,042,042,069,253,133,253,038,180,042,59214
870 DATA 069,253,106,038,250,038,251,104,010,144,208,096,100,000,000,197,16654
880 DATA 000,001,253,000,001,103,001,001,109,001,001,117,001,001,145,001,10659
890 DATA 001,209,001,000,118,000,002,124,000,002,159,000,002,165,000,002,52822
900 DATA 172,000,002,178,000,002,211,002,002,001,003,002,010,003,002,019,14849
910 DATA 003,002,035,003,002,050,003,002,028,003,002,231,002,002,222,002,52909
920 DATA 001,047,003,002,194,002,002,200,002,002,042,003,000,255,255,255,04528
930 DATA 079,165,067,084,124,013,094,124,013,095,165,067,201,043,045,097,06351
940 DATA 115,128,098,000,003,187,138,209,188,164,077,073,141,211,074,002,22835
950 DATA 000,200,064,064,064,064,064,032,000,000,160,000,132,251,132,250,37171
960 DATA 132,180,132,254,132,253,132,177,132,176,096,134,182,132,181,201,46369
970 DATA 013,240,054,166,177,208,037,201,058,176,038,201,046,208,016,072,22106
980 DATA 173,152,002,141,038,003,173,153,002,141,039,003,104,208,018,164,50064
990 DATA 176,153,146,002,230,176,201,032,208,002,230,177,032,211,001,169,15787
1000 DATA 001,166,182,164,181,108,152,002,096,164,177,240,244,169,002,072,30286
1010 DATA 168,136,185,250,000,072,041,240,074,074,074,074,024,105,065,032,48296
1020 DATA 225,002,104,041,015,024,105,065,032,225,002,104,074,144,224,169,27482
1030 DATA 061,032,225,002,169,000,133,176,164,176,185,146,002,201,032,240,17276
1040 DATA 007,032,225,002,230,176,016,240,032,198,000,169,013,032,154,002,25087
1050 DATA 076,225,002,255,44232,-9999
```

continued from page 93

C64/128

BASIC COMMANDS

S-ENTRY intercepts several vectors in the operating system, and because of this the normal basic commands are not available.... don't worry... you can still use them by prefixing the command with the @ symbol, so SAVE would become @SAVE etc.

NOTE do not use any DOS wedge, or you will confuse S-ENTRY.

S—ENTRY DISABLE

Before you run any programs that you have entered, S-ENTRY MUST BE DISABLED. Enter an ! on its own and S-ENTRY will be removed from memory and the normal operating system restored. REMEMBER ALWAYS SAVE A PROGRAM BEFORE YOU RUN IT!

MISSING LINES

In order to provide you with a flexible system, S-ENTRY only checks on a line by line basis. So if you miss out line 540 say, S-ENTRY will NOT report an error.

This may sound odd, but it does allow you to enter part of the program, then save it and come back to it at a later date. This is also helpful if you and several friends are splitting up the job of entering a large program, each person will be able to say that what has been entered is correct.

To make sure that you have the entire program, entered correctly Enter type '&' symbol on its own. S-ENTRY will then calculate the S-ENTRY code for the program in memory, you can compare this with the Final S-ENTRY code printed at the end of the listing.

ADVANCED USE

If you think that you are good enough not to use the S-ENTRY system, you can simply enter the normal basic lines after the S-ENTRY code. But what if you get it wrong? Well S-ENTRY has a command that will produce a summary of the S-ENTRY code and the line number in memory, you can then compare this with the published S-ENTRY codes and thus track down the problem. This command is ←LIST you can pause the list by using the Shift/Shift Lock keys. The command will also accept a line number range, ie 100-200 or 200— etc.

The ONLY difference that S-ENTRY makes to the published listing is the addition of the four character code before the line number, and the addition of the Final S-ENTRY code at the end of the listing.

S—ENTRY COMMAND SUMMARY

&	Calculates the S-ENTRY code for the entire program in memory.
@	Prefix to a basic command ie @DSAVE or @LOAD
!	Remove S-ENTRY
←LIST	Display S-Entry code summary, use shift/shift lock to pause.

YOU MUST

1. Use EXACTLY the same line numbers.
2. Enter the program exactly as printed, including all REMs.
3. Use EXACTLY the same commands, FULL command names MUST be used, ie '?' cannot be used instead of PRINT.
4. Remember to convert the easy enter codes ie [SP9] means type 9 spaces.
5. Type anything between " " (quotes) EXACTLY as published.

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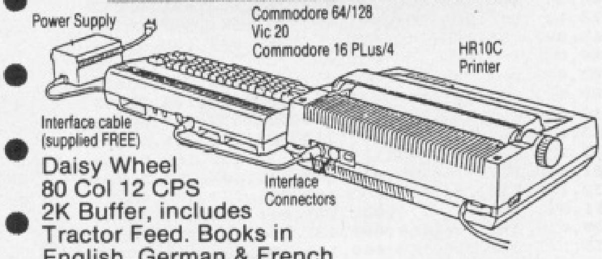

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continued from page 91

```
HKNH 1000 I=22528
GBDM 1010 READ A:IF A=256 THEN END
AJCI 1020 POKE I,A:I=I+1:GOTO 1010
FAMO 1030 DATA 000,000,000,000,000,000,000,000,000,000,000,000,000,000
OKLD 1040 DATA 000,000,000,000,000,000,000,000,000,000,000,004,000,000
GDAP 1050 DATA 021,000,000,027,000,000,025,000,000,026,000,000,008,000
LKPE 1060 DATA 000,007,000,000,063,128,000,190,000,000,055,000,000,255
PENF 1070 DATA 000,003,113,064,000,064,000,095,000,000,000,000,000,000
KAHG 1080 DATA 000,000,000,000,000,000,000,000,000,000,000,000,000,000
LKKK 1090 DATA 000,000,004,000,000,021,000,000,027,000,000,025,000,000
NNNA 1100 DATA 026,000,000,008,000,000,004,000,000,063,000,000,060,000
OAHL 1110 DATA 000,062,000,000,244,000,000,252,000,000,252,000,000,197
OCAN 1120 DATA 000,159,000,000,000,000,000,000,000,000,000,000,000,000
DDED 1130 DATA 000,000,000,000,000,000,000,000,000,000,000,000,000,004
GFLI 1140 DATA 000,000,021,000,000,027,000,000,025,000,000,026,000,000
MPLC 1150 DATA 008,000,000,004,000,000,060,128,000,191,000,000,052,000
LLIB 1160 DATA 000,119,000,000,124,064,000,241,000,170,000,000,000,000
JGMJ 1170 DATA 000,000,000,000,000,000,000,000,000,000,000,000,000,000
JOEG 1180 DATA 000,000,000,000,004,000,000,021,000,000,059,000,000,025
DCLC 1190 DATA 000,000,042,000,000,008,000,000,055,000,000,255,192,000
NPLP 1200 DATA 247,192,000,255,192,000,183,128,000,063,000,000,063,000
KGOC 1210 DATA 000,093,064,170,000,000,000,000,000,000,000,000,000,000
NBHB 1220 DATA 000,000,000,000,000,000,000,000,000,000,000,000,004,000
KEKN 1230 DATA 000,059,000,000,025,000,000,170,128,000,230,192,000,200
AMDE 1240 DATA 192,000,247,192,000,063,000,000,055,000,000,063,000,000
BKHJ 1250 DATA 055,000,000,063,000,000,029,000,000,081,064,170,000,000
FLDA 1260 DATA 000,000,000,000,000,000,000,000,000,000,000,000,000,000
ADGI 1270 DATA 000,000,000,000,000,000,004,000,000,059,000,000,025,000
MBGJ 1280 DATA 002,042,032,003,042,048,003,200,240,000,247,192,000,063
CKAM 1290 DATA 000,000,055,000,000,063,000,000,055,000,000,063,000,000
PFCP 1300 DATA 029,000,000,081,064,170,256
S-ENTRY CODE = NIEE
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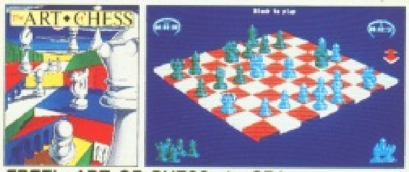
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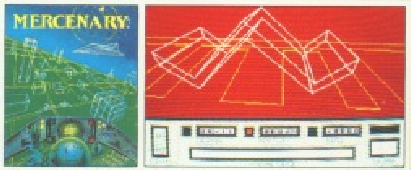
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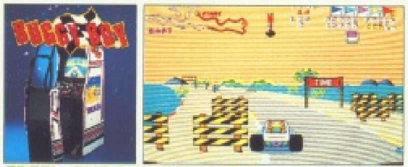
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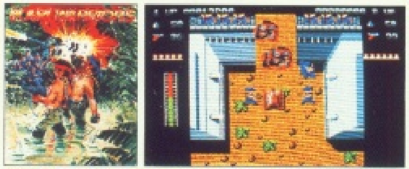
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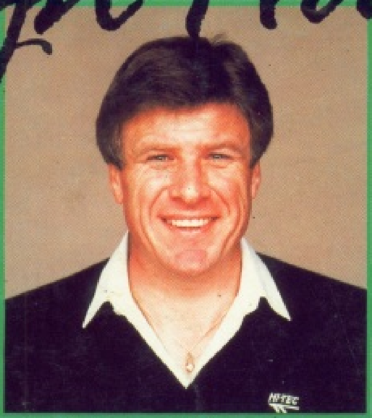

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